

CURRICULUM VITAE
THOMAS GORDON WOLCOTT
(17 JAN 2007)

PERSONAL

Address: Department of Marine, Earth and Atmospheric Sciences
Box 8208
North Carolina State University
Raleigh, NC 27695-8208
Phone (919) 515-7866 FAX (919) 515-7802
Internet "Tom_Wolcott@ncsu.edu"

Home: 18 Henderson Street
Raleigh, NC 27607
Phone (919) 821-4203

Born: San Diego, CA; 22 Dec 1944

Citizenship: U.S.A.

ACADEMIC TRAINING

University of California, Riverside (1 year study in Göttingen, West Germany)	B.A. (Zoology), <i>magna cum laude</i> , 1966
University of California, Berkeley	Ph.D. (Zoology) 1971

Dissertation: Physiological ecology and habitat partitioning in Acmaeid limpets.
(Supported by NSF Graduate Fellowship).

EMPLOYMENT

1971-72	Lecturer in Biology	Univ. of Calif., Riverside,
1972-78	Assistant Professor	Dept. of Zoology and Center for Marine and Coastal Studies, NC State University
1978-85	Associate Professor	Marine, Earth & Atmospheric Sciences, NC State University.
1985-	Professor	Marine, Earth & Atmospheric Sciences, NC State University.
1985, 88	Visiting Investigator	Smithsonian Environmental Research Center (Summers).
1985-	Research Associate	Smithsonian Environmental Research Center.

RESEARCH INTERESTS

Physiological ecology, particularly the role of physical environmental factors in limiting the range or distribution of marine invertebrates, and the energetic or reproductive advantages of adaptations to physical environments. Nitrogen, water and salt relations in herbivorous terrestrial crabs. Development of field instrumentation, including low-power microelectronics and biotelemetry. Behavioral, physiological, and reproductive ecology of blue crabs. Larval transport and recruitment, and initiation/transport of red tide blooms, using microprocessor-controlled "plankton mimics".

PROFESSIONAL SOCIETIES AND SERVICE

Society of Integrative & Comparative Biology
Secretary, Division of Ecology and Evolution, 1979-82
Education Committee, 1990-1992
Secretary of the Society, 1996-1999
Chair, Division of Invertebrate Zoology 2003-2006

AAAS (elected Fellow, 1994)

Phi Beta Kappa (President, NCSU Zeta Chapter, 2002-2003)

Sigma Xi (NCSU Chapter Membership Committee, 1990-92)

The Crustacean Society
Governing Board, 1980-83
Awards Committee, 1989-92
Program Officer, 1996-1998

American Society of Limnology and Oceanography

Louisiana Board of Regents statewide review panel, Biological Sciences (1989-90)

Editorial Board, *Physiological Zoology*, 1993-99

TEACHING EXPERIENCE

Undergraduate: Animal Physiology, Cell Biology (at U. Calif. Riverside); Introductory Oceanography, Marine Biology, Invertebrate Zoology

Graduate: Invertebrate Physiology, Adaptations to Marine Environments, Biotelemetry and Instrumentation Techniques, Biological Oceanography

ADMINISTRATIVE EXPERIENCE

Chair of the Faculty and of Dean's Faculty Advisory Council, College of Physical and Mathematical Sciences (1988-89; 90-91).

Search Committees, Biological Oceanography, Physical Oceanography, Tropical Meteorology, Dean of the College.

Coordinator of NCSU Marine Science Faculty, NCSU, 1995-2001

PUBLICATIONS

Wolcott, T. G. 1973. Physiological ecology and intertidal zonation in limpets (*Acmaea*): a critical look at "limiting factors". *Biological Bulletin* 145: 389-422.

Wolcott, T. G. 1976. Uptake of soil capillary water by ghost crabs. *Nature (London)* 264(5588): 756-757.

Wolcott, T. G. 1977. Optical tracking and telemetry for nocturnal field studies. *Journal of Wildlife Management* 41: 309-312.

Wolcott, T. G. 1978. Ecological role of ghost crabs, *Ocypode quadrata* (Fabricius), on an ocean beach: scavengers or predators? *Journal of Experimental Marine Biology and Ecology* 31: 67-82.

Wolcott, T. G. 1980a. Heart-rate telemetry using micropower integrated circuits. Pp. 279-286 in A Handbook for Biomedical Telemetry and Radio Tracking, C. J. Amlaner and D. W. MacDonald, eds., Pergamon, Oxford.

Wolcott, T. G. 1980b. Optical and radio-optical techniques for tracking nocturnal animals. Pp. 333-337 in A Handbook for Biomedical Telemetry and Radio Tracking, C. J. Amlaner and D. W. MacDonald, eds., Pergamon Press, Oxford.

- Wolcott, T. G. 1981a. A radio probe for mapping burrows without excavation. *Journal of Wildlife Management* 45: 1069-1072.
- Wolcott, T. G. 1981b. Inhaling without ribs: the problem of suction in soft-bodied invertebrates. *Biological Bulletin* 160:189-197.
- Wolcott, T. G., and D. L. Wolcott. 1982. Larval loss and spawning behavior in land crabs, *Gecarcinus lateralis* Freminville. *Journal of Crustacean Biology* 2:477-485.
- Wolcott, T. G. 1984. Uptake of soil interstitial water: mechanisms and ecological significance in the ghost crab *Ocypode quadrata* and two gecarcinid land crabs. *Physiological Zoology* 57: 161-184.
- Wolcott, D. L., and T. G. Wolcott. 1984. Food quality and cannibalism in the red land crab, *Gecarcinus lateralis*. *Physiological Zoology* 57:318-324.
- Wolcott, T. G., and D. L. Wolcott. 1984. Impact of off-road vehicles on macro-invertebrates of a mid-Atlantic beach. *Biological Conservation* 28:217-240.
- Wolcott, T. G., and D. L. Wolcott. 1985. Extrarenal modification of urine for ion conservation in ghost crabs, *Ocypode quadrata* (Fabricius). *J. exp. mar. Biol. Ecol.* 91:93-107
- Wolcott, T. G., and D. L. Wolcott. 1986. Factors influencing the limits of migratory movements in terrestrial crustaceans. *In* M. A. Rankin, Ed., *Migration: Mechanisms and Adaptive Significance* (Proceedings of the University of Texas Centennial Symposium). *Contr. Mar. Sci. Univ. Texas Mar. Sci. Inst. Suppl.* 27:257-273.
- Wolcott, D. L., and T. G. Wolcott. 1987. Nitrogen limitation in the herbivorous land crab *Cardisoma guanhumi*. *Physiological Zoology* 60:262-268.
- Wolcott, T. G., and D. L. Wolcott. 1988. Availability of salts is not a limiting factor for the land crab, *Gecarcinus lateralis* (Freminville). *J. Exp. Mar. Biol. Ecol.* 121:193-207.
- Wolcott, T. G. 1988. Ecology. Pp. 55-96 *in*: *Biology of Land Crabs* (W. Burggren and B. McMahon, Eds), Cambridge University Press, New York.
- Wolcott, T. G., and D. L. Wolcott. 1988. When limiting factors aren't: lessons from land crabs. Pages 135-151 *in* *Adaptation to Intertidal Life* (M. Vannini and G. Chelazzi, eds.), Plenum Press, New York.
- Wolcott, T. G., and A. H. Hines. 1989. Ultrasonic biotelemetry of muscle activity from free-ranging marine animals: a new method for studying foraging by blue crabs (*Callinectes sapidus*). *Biol. Bull.* 176:50-56.
- Wolcott, T. G., and A. H. Hines. 1990. Ultrasonic telemetry of small-scale movements and microhabitat selection by molting blue crabs (*Callinectes sapidus*). *Bull. Mar. Sci.* 46:83-94
- Shirley, M. A., A. H. Hines, and T. G. Wolcott. 1990. Adaptive significance of habitat selection by molting adult blue crabs, *Callinectes sapidus* (Rathbun), within a subestuary of central Chesapeake Bay. *Journal of Experimental Marine Biology and Ecology* 140:107-119.
- Wolcott, T. G., and D. L. Wolcott. 1991. Ion conservation by reprocessing of urine in the land crab *Gecarcinus lateralis* (Freminville). *Physiological Zoology* 64:344-361.
- Shirley, M. A., and T. G. Wolcott. 1991. A telemetric study of microhabitat selection by premolt and molting blue crabs, *Callinectes sapidus* (Rathbun) within a subestuary of the Pamlico River, North Carolina. *Marine Behavior and Physiology* 19:133-148.
- Hines, A., T. Wolcott, E. Gonzalez-Gurriaran, J.L. Gonzalez-Escalante, and J. Friere. 1994. Movement and migrations in crabs: telemetry of juvenile and adult behaviour in *Callinectes sapidus* (Portunidae) and *Maja squinado* (Majidae). P. 13 *in*: R. Williamson (ed.), *Orientation and migration in the Sea*. Society for Experimental Biology, Plymouth, England.
- Hines, A.H., T.G. Wolcott, E. Gonzalez-Gurriaran, J.L. Gonzalez-Escalante, and J. Friere. 1995. Movement patterns and migrations in crabs: telemetry studies of juvenile and adult behaviour in *Callinectes sapidus* and *Maja squinado*. *Journal of the Marine Biological Association of the U.K.* 75:27-42

- Wolcott, T. G. 1995. New Options in Physiological and Behavioural Ecology Through Multichannel Telemetry. *Journal of Experimental Marine Biology and Ecology* 193:257-275.
- Perkins-Visser, E., T. G. Wolcott and D. L. Wolcott. 1996. Nursery role of seagrass beds: enhanced growth of juvenile blue crabs (*Callinectes sapidus*). *Journal of Experimental Marine Biology and Ecology* 198:155-173.
- Chen, Y-H., P. T. Shaw, and T. G. Wolcott. 1997. Enhancing estuarine retention of planktonic larvae by tidal currents. *Estuarine, Coastal and Shelf Science* 445:525-533.
- Lowe, C. G., K. N. Holland and T. G. Wolcott. 1998. A new acoustic tailbeat transmitter for fishes. *Fisheries Research* 36:275-283.
- Wolcott, D. L., and T. G. Wolcott. 1999. High mortality of Piping Plovers on beaches with abundant ghost crabs: correlation, not causation. *Wilson Bulletin* 111:321-329.
- Clark, M. E., T. G. Wolcott, D. L. Wolcott, and A. H. Hines. 1999. Foraging and agonistic activity co-occur in free-ranging blue crabs (*Callinectes sapidus*): Observation of animals by ultrasonic telemetry. *Journal of Experimental Marine Biology and Ecology* 233:143-160.
- Clark, M. E., T. G. Wolcott, D. L. Wolcott, and A. H. Hines. 1999. Intraspecific Interference Among Foraging Blue Crabs (*Callinectes sapidus*): Interactive Effects of Predator Density and Prey Patch Distribution. *Marine Ecology Progress Series* 178:69-78.
- Kendall, M.S., and T. G. Wolcott. 1999. The influence of male mating history on male-male competition and female choice in mating associations of the blue crab, *Callinectes sapidus* (Rathbun). *Journal of Experimental Marine Biology and Ecology* 239:23-32.
- Clark, M. E., T. G. Wolcott, D. L. Wolcott, and A. H. Hines. 2000. Foraging behavior of an estuarine predator, the blue crab *Callinectes sapidus*, in a patchy environment. *Ecography* 23(1): 21-31.
- Kendall, M. S., D. L. Wolcott, T. G. Wolcott and A. H. Hines. 2001. Reproductive potential of individual male blue crabs, *Callinectes sapidus*, in a fished population: depletion and recovery of sperm-number and seminal fluid. *Canadian J. Fisheries & Aquatic Sciences* 58(6):1168-1177
- Wolcott, T. G., and D. L. Wolcott. 2001. The role of behavior in meeting osmotic challenges. *American Zoologist* 41:795-806.
- Kendall, M. S., D. L. Wolcott, T. G. Wolcott and A. H. Hines. 2002. Influence of male size and mating history on ejaculates in the blue crab, *Callinectes sapidus*. *Marine Ecology Progress Series* 230:235-240.
- Bell, G. W., D. B. Eggleston and T. G. Wolcott. 2003. Behavioral responses of free-ranging blue crabs to episodic hypoxia: I. Movement. *Mar. Ecol. Prog. Ser.* 259:215-225
- Bell, G. W., D. B. Eggleston and T. G. Wolcott. 2003. Behavioral responses of free-ranging blue crabs to episodic hypoxia: II. Feeding. *Mar. Ecol. Prog. Ser.* 259:227-235
- Hines, A.H., P.R. Jivoff, P.J. Bushmann, J. vanMontfrans, D.L Wolcott and T. G. Wolcott. 2003. Evidence for sperm limitation in female blue crabs (*Callinectes sapidus*). *Bulletin of Marine Science* 72:287-310.
- Turner, H. V., D. L. Wolcott, T. G. Wolcott and A. H. Hines. 2003. Behavior and intramolt growth in post-copulatory female blue crabs, *Callinectes sapidus* Rathbun, in the Chesapeake Bay. *J. Exper. Mar. Biol. Ecol.* 295: 107-130.
- Cooke, S.J., Hinch, S.G., Wikelski, M., Andrews, R.D., Kuchel, L.J., Wolcott, T.G., & Butler, P.J. 2004. Biotelemetry: a mechanistic approach to ecology. *Trends in Ecology and Evolution* 19(6):334-343.
- Carver, A. M., T. G. Wolcott, D. L. Wolcott and A. H. Hines. 2005. Unnatural selection: effects of a male-focused size-selective fishery on reproductive potential of a blue crab population. *J. Exper. Mar. Biol. Ecol.* 319:29-41
- D. L. Wolcott, Hopkins, C. W. B., and T. G. Wolcott. 2005. Early events in seminal fluid and sperm storage in the female blue crab *Callinectes sapidus* Rathbun: Effects of male mating history, male size, and season. *J. Exper. Mar. Biol. Ecol.* 319:43-55

Aguilar, R., A.H. Hines, M.A. Kramer, T.G. Wolcott, D.L. Wolcott, and R.N. Lipcius. 2005. Migration of mature female blue crabs: seasonal timing and route in Chesapeake Bay. *J. Exper. Mar. Biol. Ecol.* 319:117-128

David A. Medici, Thomas G. Wolcott, and Donna L. Wolcott. 2006. Scale dependent movements and protection of female blue crabs (*Callinectes sapidus*). *Can. J. Fish. Aquatic Sci.* 63:858-871

PATENT DISCLOSURE:

Wolcott, T. G. 1993. Vertically-migrating Lagrangian Drifter for Oceanographic Studies. Patent Disclosure, filed with NCSU, deemed patentable by patent counsel, and managed (without result) by Triangle Universities Licensing Consortium.

POPULAR ARTICLES

Wolcott, T. G., and D. L. Wolcott. 1990. Wet behind the gills. *Natural History*, October 1990, pp. 46-55. (Physiological ecology of land crabs).

PRESENTATIONS AT RECENT MEETINGS:

Wolcott, T. G., D. L. Wolcott, H. B. Turner and A. H. Hines, "Migration of adult female blue crabs—do they smoke after mating?", Benthic Ecology Meetings, Orlando FL, 21-24 Mar 2002.

Wolcott, D. L., A. M. Carver, T. G. Wolcott and A. H. Hines, "Fishing pressure and the blue crab *Callinectes sapidus*: reproductive consequences", Benthic Ecology Meetings, Orlando FL, 21-24 Mar 2002.

Bell, G. W., D. B. Eggleston and T. G. Wolcott, "The effect of dynamic hypoxia on the movement patterns and depth distribution of adult blue crabs within a highly eutrophic river", Benthic Ecology Meetings, Orlando FL, 21-24 Mar 2002.

Wolcott, T. G., D. L. Wolcott, D. A. Medici and A. H. Hines, "Migration of adult female blue crabs from mating areas to the maternity suite: when, where, and who cares?" Society for Integrative and Comparative Biology, Toronto, Jan 2003

Wolcott, T. G., D. L. Wolcott and A. H. Hines, "Migration of adult female blue crabs from mating areas to the maternity suite: when, where, and who cares?" Benthic Ecology Meetings, Groton CT, Mar 2003

Wolcott, D. L., and T. G. Wolcott, "Potential fecundity of female blue crabs, *Callinectes sapidus*: brood fertility and sperm stores in the NC spawning population". Benthic Ecology Meetings, Groton CT, Mar 2003

Medici, D. A., T. G. Wolcott and D. L. Wolcott, "Scale-dependent movements and microhabitat selection by mature female blue crabs, *Callinectes sapidus*". Benthic Ecology Meetings, Groton CT, Mar 2003

Aguilar, R., M. A. Kramer, A. H. Hines, T. G. Wolcott and D. L. Wolcott, "The timing and route of newly-inseminated female blue crabs in the Chesapeake Bay: aspects of female migration". Benthic Ecology Meetings, Groton CT, Mar 2003

Hines, A. H., M. A. Kramer, T. G. Wolcott, D. L. Wolcott, and J. Freire, "Long-term decline in juvenile blue crab mortality: local-scale experiments reflect large-scale reduction of Chesapeake population". Benthic Ecology Meetings, Groton CT, Mar 2003

Aguilar, R., M. A. Kramer, A. H. Hines, T. G. Wolcott, D. L. Wolcott, and R. N. Lipcius. The timing and route of newly-inseminated blue crabs in Chesapeake Bay: aspects of female migration. Crustacean Society Summer Meetings, Williamsburg VA, June 1-5 2003

Hines, A. H., T. G. Wolcott, J. Terwin, and S. Thrush. "Spatial scale of blue crab (*Callinectes sapidus*) foraging on bivalve prey". The Crustacean Society Summer Meeting, Williamsburg, VA, June 1-5, 2003.

Bell, G., D. B. Eggleston and T. G. Wolcott. "Feeding response of free-ranging blue crabs to episodic hypoxia". The Crustacean Society Summer Meeting, Williamsburg, VA, June 1-5, 2003.

- Wolcott, T. G., and D. L. Wolcott. "Exploring reproductive biology of intensely-exploited blue crabs in the field: options and insights from microelectronics." Seahorse Key Marine Laboratory 50th Anniversary Commemorative Lectures, Nov. 6, 2003. (Invited presentation)
- Wolcott, D.L., C.W.B. Hopkins, and T.G. Wolcott. "Sperm storage in the blue crab, *Callinectes sapidus*: biology, ecology, and fisheries." Society for Integrative and Comparative Biology Meetings, New Orleans, LA. 5-9 January 2004.
- Wolcott, T.G., D.L. Wolcott, A. H. Hines. "Exploring migration of female blue crabs to spawning grounds, using biotelemetry and CTD data loggers." Society for Integrative and Comparative Biology Meetings, New Orleans, LA. 5-9 January 2004.
- Wolcott, T. G.. "Electronic datagathering: real crabs and fake dinoflagellates." Duke-UNC Oceanographic Consortium research symposium, 19-20 Nov. 2004.
- Wolcott, T. G., D. Kamykowski and G. Janowitz. "Red Tides: what's good behavior for a bad alga?" Society for Integrative and Comparative Biology, San Diego, 10 Jan 05.
- Wolcott, T.G., D. Kamykowski and G. Janowitz. "A Behaving Drifter for Simulating Transport of Mobile HAB Organisms in Nature" (poster), GEOHAB Conference, Baltimore MD, 9 Mar 05.
- Wolcott, T. G., D. L. Wolcott and A. H. Hines. "Migration by female blue crabs: Lessons from loggers" (poster); NOAA Chesapeake Bay Office Research Symposium, Laurel MD, 27 Mar 05.
- Wolcott, D.L., Carver, A.M., Davis, J., Wolcott, T.G. and Hines, A.H. Impact of a size-selective fishery on mating systems in the blue crab, *Callinectes sapidus*. 6th International Crustacean Congress, Glasgow Scotland, 21 July 05.
- Hines, A.H., Jivoff, P.R., Lipcius, R.N., Wolcott, T.G., and Wolcott, D.L. Complex impacts on reproductive processes in a heavily exploited crab stock: an overview for Chesapeake blue crabs, *Callinectes sapidus*. 6th International Crustacean Congress, Glasgow Scotland, 21 July 05.
- Wolcott, T. G., D. L. Wolcott, D. Kamykowski and L. Waters-Lindqvist. "Plankton mimicry: fake dinoflagellates to help understand real red tides." Society for Integrative and Comparative Biology, Orlando FL, 7 Jan 06.
- Wolcott, D. L., T. G. Wolcott, A. H. Hines and D. A. Medici. "Migration of female blue crabs from mating areas to spawning grounds." Society for Integrative and Comparative Biology, Orlando FL, 5 Jan 06.
- Wolcott, T.G., D.L. Wolcott, D. Kamykowski and L. Waters-Lindqvist. Control of vertical migration in harmful algal blooms (HABs): field-testing a model using a robot "Plankton Mimic". Society for Integrative and Comparative Biology, Phoenix AZ, 7 Jan 07.
- Wolcott, T.G., D. Kamykowski, L. Waters-Lindqvist, and D.L. Wolcott. A robot "Plankton Mimic": field tests using a model for control of vertical migration in harmful algal blooms (HABs). Benthic Ecology Meetings, Atlanta GA, 23 Mar 07.

REVIEWS

- Books on crustacean biology.
- Review panel for Biological Science Programs for Louisiana Board of Regents (regional and statewide panels), 1989.
- Manuscripts for numerous journals
- Proposals for NSF, Sea Grant, National Geographic, Northwest Fisheries Research Board, etc.

GRANTS AND AWARDS

- "Physiological ecology of *Ocypode quadrata* on North Carolina sand beaches"; T. G. Wolcott; UNC Marine Science Council, \$3,310; 9/74-9/75.

- "Physiological and ecological effects of currents on attached estuarine communities"; T. G. Wolcott; UNC Marine Science Council, \$2,500; 9/75-9/76.
- "Uptake of soil water by semiterrestrial and terrestrial crabs: comparative physiology and ecological significance"; T. G. Wolcott and D. L. Wolcott; NSF DEB-7716631, \$40,000; 9/77-9/80.
- "Physiological ecology of soil water uptake by terrestrial crabs on Bermuda"; T. G. Wolcott and D. L. Wolcott; NSF supporting grant through Bermuda Biological Station, \$3,396; 6/79-8/79.
- "Impact of off-road vehicles on beach invertebrates of the Cape Lookout National Seashore"; T. G. Wolcott and D. L. Wolcott; National Park Service, \$10,527; 9/79-3/81.
- "Osmoregulation in land crabs"; T. G. and D. L. Wolcott; Bermuda Biological Station Exxon Fellowship, \$2300; 6/82-8/82.
- "Mechanisms of ion conservation in terrestrial crabs"; T. G. Wolcott and D. L. Wolcott; NSF PCM83-10465; \$44,118; 11/83-10/86 (D. L. Wolcott, co-P.I.).
- Short-term Visiting Investigator Award for collaborative research on Blue Crab behavioral ecology at Smithsonian Ecological Research Center, Edgewater, MD; Smithsonian Institution; \$1725; 7/85-8/85
- "Telemetric analysis of movement, habitat utilization and foraging by the blue crab *Callinectes sapidus*." Smithsonian Institution Scholarly Studies Program; \$52,000; 4/86-4/88. (A. H. Hines, Co-P.I.).
- "Development of a prototype 'smart buoy' for studies of transport and recruitment of planktonic larvae." North Carolina Marine Science Council; \$3,500; 7/87-6/88.
- Short-term Visiting Investigator Award for collaborative research on telemetry of Blue Crab behavior at Smithsonian Ecological Research Center, Edgewater, MD; Smithsonian Institution; \$1582; 7/88
- "Habitat requirements for molting and mating blue crabs, *Callinectes sapidus*"; T. G. Wolcott; N.C. Sea Grant, \$60,193; 1/88-12/89.
- "Evaluation of Larval Transport Models through Field Experiments using a Programmable, Vertically-Migrating 'Zooplankton Mimic'"; T. G. Wolcott and D. L. Wolcott; NSF OCE-8900060, \$302,115; 1 Nov 89 to 31 Oct 92 (parallel grant to R. B. Forward Jr., Duke Univ. Marine Lab).
- "Complex predator-prey interactions in marine soft-bottom communities: crabs, clams and patch dynamics"; T. G. Wolcott and D. L. Wolcott; NSF OCE-9002168, \$160,000; 1 June 90 to 31 May 93 (parallel grant to Chesapeake Research Consortium).
- "Elucidation of estuary ingress mechanisms for fish larvae using a vertically-migrating 'larval mimic'"; T. G. Wolcott and D. L. Wolcott; NOAA Cooperative Institute for Fisheries Oceanography, \$24,000; 8/92-7/93.
- "Ghost crab predation and fledging success of piping plovers"; T. G. Wolcott and D. L. Wolcott; US Fish and Wildlife Service, \$31,500; Apr 94-Apr 95.
- "Real-time data for critical decisions about NC coastal waters"; T. G. Wolcott, L. J. Pietrafesa & L. Xie, co-PIs; Z. Smith Reynolds Foundation; \$65,000; 1 Jul 97-30 Jun 2002.
- "Sperm allocation and potential for sperm limitation in the blue crab, *Callinectes sapidus*"; T. G. Wolcott and D. L. Wolcott, PIs; NSF Ocean Sciences, \$225,000, 01 Jan 1998-31 Dec. 2001 (proposal also resulted in parallel grant to Smithsonian Environmental Research Center).
- "Larval dynamics and water exchange at the entrance to Narragansett Bay"; T. G. Wolcott & D. L. Wolcott; NC Sea Grant R-MRD/41, \$41,626; 01 Feb 98-31 Jan 2000 (NCSU segment of regional project with S. Cobb, J. Collie and M. Clancy, Univ. of Rhode Island).
- "Migration of adult female blue crabs to spawning grounds: mechanisms and routes"; T. G. Wolcott & D. L. Wolcott; NOAA Chesapeake Bay Program; \$303,983; 01 Oct 00-30 Sep 06.
- "Tagging of adult female blue crabs to study migration toward and use of 'spawning sanctuaries'"; T. G. Wolcott, D. L. Wolcott, R. Doxey, D. Doxey, G. Ballance, co-PIs; NC Sea Grant Fisheries Resource Grant; \$68,625; 15 May 2001-14 May 2003

- “Direct and indirect effects of water quality on trophic interactions in a eutrophic coastal river: movement patterns, foraging, and mortality of blue crabs.”; D. B. Eggleston and T. G. Wolcott, co-PIs; NC Sea Grant; \$49,000; 01 Feb 2000-31 Jan 2002.
- “Behaving drifters as *Gymnodinium breve* mimics.”; D. Kamykowski, G. Janowitz and T. G. Wolcott, co-PIs; EPA; \$574,983; 19 Nov 2001-18 Nov 2005.
- “Functional sperm limitation in NC blue crabs” (co-PI with D. L. Wolcott), NC Sea Grant, \$85,000, 15 May 2002-14 May 2004 (funded as Y1 and Y2).
- “Functional sperm limitation in NC blue crabs—Year 2” (co-PI with D. L. Wolcott), NC Sea Grant, \$85,000, 15 May 2003-14 May 2004.
- “The Carolinas Coastal Observing and Prediction System” (with L. J. Pietrafesa, PI, and J. Morrison and L. Xie, co-PIs), Univ. of South Carolina (subcontract), \$1,220,000, 01 May 2002-30 Apr 2003.
- “Small-scale movements and protection of brooding female blue crabs within a spawning sanctuary” (Gene Ballance, commercial crabber co-PI), NC Sea Grant, \$15,874, 1 May 2003-30 Apr 2004.
- “Rapid Efficient implementation of communications protocols for embedded systems” (A. Dean, M. Sichertiu, co-PIs), NSF, \$337,000 (\$38,724 to TGW), 16 Aug 2005-15 Aug 2008.

THESES DIRECTED

- Thorp, James Harrison III Ph.D., 1975. "Mechanisms of coexistence between two sympatric species of the grass shrimp *Palaemonetes* (Decapoda: Palaemonidae)." (with Gordon Thayer, NMFS)
- Mollick, Ronald Samuel Ph.D., 1977. "Influences of the estuarine tidal gradient on the biology and ecology of *Terebra dislocata* (Gastropoda: Prosobranchia)." (with Gordon Thayer, NMFS)
- Guida, Vincent George Ph.D., 1977. "Physiological ecology of the burrowing sponge-oyster symbiosis and the role of symbiosis in marine systems." (with Gordon Thayer, NMFS)
- Modjeska, Janet Sue Shy M.S., 1977. "Effects of thermal shock on various stages of Atlantic Silverside (*Menidia menidia*)." (with Don Hoss, NMFS)
- Simon, Barbara Jeanne M.S., 1978. "The effect of copper on the Atlantic Silverside, *Menidia menidia*." (with David Engel, NMFS)
- Keney, Peggy M. M.S., 1981. "Suitability of Black Drum for aquaculture".
- Hall, Laura Ann M.S., 1982. "Osmotic and ionic regulation in overwintering ghost crabs, *Ocypode quadrata*."
- Peirson, William Michael Ph.D., 1983 "Physiological and biochemical factors influencing nutritional value of phytoplankton as food for the Bay Scallop *Argopecten irradians concentricus* (Say)." (with Gordon Thayer, NMFS)
- Berdasco, Nancy M. Non-thesis Masters, 1985.
- Nye, Laura A. M.S., 1989. "Variation in feeding behavior of blue crabs (*Callinectes sapidus* Rathbun) measured by ultrasonic biotelemetry."
- Shirley, Michael A. Ph.D., 1990. "Habitat selection by molting and mating blue crabs."
- O'Connor, Nancy J. Ph.D., 1990. "Larval Settlement and juvenile recruitment in fiddler crab populations."
- Perkins, Eileen. M.S., 1993. "Ecological role of seagrass beds as refuge for juvenile blue crabs."
- Chen, Yung-hui (David). M.S., 1994. "Numerical simulation of estuarine retention of larvae by tidal currents." (Ping Tung Shaw, co-chair).
- Clark, Mary E. Ph.D., 1997. "Foraging behavior and intraspecific interactions of blue crabs (*Callinectes sapidus*) in a patchy environment: Observations of individuals by ultrasonic telemetry".
- Kendall, Matthew. M.S., 1998. "Potential for sperm limitation in blue crabs, *Callinectes sapidus*."

Carver, Adina M. M.S., 2002. "Selective fishing pressure on large male blue crabs negatively affects male size, sex ratio, and population reproductive potential in the upper Chesapeake Bay."

Medici, David A. M.S., 2004. Scale dependent movements and protection of the female blue crab, *Callinectes sapidus*.