

## **CURRICULUM VITAE**

### **RICHARD A. SATTERLIE**

#### EDUCATION

University of California, Santa Barbara Ph.D. 1978  
Sonoma State University (California) B.A. 1973

#### PROFESSIONAL EMPLOYMENT

University of California, Santa Barbara	Research Asst.	1975-78
University of Alberta (Canada)	Postdoc. Fellow	1978-80
University of Alberta	Lecturer	1979-80
Arizona State University	Assistant Prof.	1980-85
Arizona State University	Associate Prof.	1985-91
Arizona State University	Professor	1991-04

#### CURRENT POSITION (2004-PRESENT)

Frank Hawkins Kenan Distinguished Professor of Marine Biology  
Center for Marine Science and Department of Biology and Marine Biology  
University of North Carolina Wilmington

#### AWARDS AND HONORS

1978 Grass Foundation Fellowship in Neurobiology, Marine Biological Laboratory, Woods Hole, MA.  
1979 Izaak Walton Killam Memorial Post-Doctoral Scholarship, University of Alberta  
1990 Dean's Distinguished Teaching Award - College of Liberal Arts and Sciences, Arizona State University  
1990 Outstanding Professor Award from Arizona State University chapter of the Golden Key National Honor Society  
1991 Honorary Faculty Initiate, Arizona State University chapter of Alpha Lambda Delta (national honor society for Freshmen). This is an annual award to honor a faculty member for excellence in undergraduate teaching.  
1992 Distinguished Alumni Award - Sonoma State University, Rohnert Park, California  
1994 Fulbright scholarship for Sabbatical at the University of St. Andrews (Fall semester 1994)  
1994-96 Parents Association Professor, Arizona State University  
2002 John Simon Guggenheim Memorial Foundation Fellowship (Academic Year 2002-03)

#### PUBLICATIONS - Full Papers

- 1976 Satterlie, R.A., P.A.V. Anderson and J.F. Case. Morphology and electrophysiology of the through-conducting systems in Pennatulid Coelenterates. IN G.O. Mackie (ed.) Coelenterate Ecology and Behavior. Plenum, New York. pp. 619-627.
- 1978 Satterlie, R.A., and J.F. Case. Neurobiology of the gorgonian coelenterates, Muricea californica and Lophogorgia chilensis. II. Morphology. Cell Tiss. Res. 187: 379-396.
- 1978 Satterlie, R.A., and J.F. Case. Neurobiology of the gorgonian coelenterates, Muricea californica and Lophogorgia chilensis. I. Behavioural physiology. J. Exp. Biol. 79:191-204.
- 1978 Satterlie, R.A., and J.F. Case. Gap junctions suggest epithelial conduction within the comb plates of the ctenophore Pleurobrachia pileus. Cell Tiss. Res. 193: 87-92.
- 1979 Satterlie, R.A., and A.N. Spencer. Swimming control in the cubomedusan jellyfish Carybdea rastonii. Nature 281: 141-142.
- 1979 Satterlie, R.A. Central control of swimming in the cubomedusan jellyfish Carybdea rastonii. J. Comp. Physiol. A 133: 357-367.
- 1979 Satterlie, R.A., and J.F. Case. Development of bioluminescence and other effector responses in the pennatulid coelenterate Renilla kollikeri. Biol. Bull. 157: 506-523.
- 1980 Satterlie, R.A., P.A.V. Anderson and J.F. Case. Colonial coordination in anthozoans: Pennatulacea. Mar. Behav. Physiol. 7: 25-46.
- 1980 Satterlie, R.A. and J.F. Case. Neurobiology of the stoloniferan octocoral Clavularia sp. J. Exp. Zool. 212: 87-99.
- 1980 Spencer, A.N. and R.A. Satterlie. Electrical and dye-coupling in an identified group of neurons in a coelenterate. J. Neurobiol. 11: 13-19.
- 1981 Spencer, A.N. and R.A. Satterlie. The action potential and contraction in subumbrellar swimming muscle of Polyorchis penicillatus (Hydromedusae). J. Comp. Physiol. 144: 401-407.
- 1983 Satterlie, R.A. and A.N. Spencer. Neuronal control of locomotion in hydrozoan medusae: A comparative study. J. Comp. Physiol. 150: 195-206.
- 1985 Satterlie, R.A. Central generation of swimming activity in the hydrozoan jellyfish Aequorea aequorea. J. Neurobiol. 16: 41-55.
- 1985 Satterlie, R.A. Putative extraocular photoreceptors in the hydrozoan jellyfish Polyorchis penicillatus. J. Exp. Zool. 233: 133-137.
- 1985 Satterlie, R.A. Control of swimming in the hydrozoan jellyfish Aequorea aequorea: Direct activation of the subumbrella. J. Neurobiol. 16: 211-226.
- 1985 Satterlie, R.A. Structural variability in an identified interneurone in locusts from wild populations. J. Exp. Biol. 144: 691-695.
- 1985 Satterlie, R.A. Reciprocal inhibition and postinhibitory rebound produce reverberation in a locomotor pattern generator. Science 229: 402-404.
- 1985 Satterlie, R.A. and R.A. Cameron. Electrophysiological analysis of settling and metamorphosis in an echinopluteus larva. J. Exp. Zool. 235: 197-204.
- 1985 Satterlie, R.A. and A.N. Spencer. Swimming in the pteropod mollusc Clione limacina. II. Physiology. J. Exp. Biol. 116: 205-222.
- 1985 Satterlie, R.A., M. LaBarbera and A.N. Spencer. Swimming in the pteropod mollusc Clione limacina. I. Behaviour and morphology. J. Exp. Biol. 116: 189-204.

- 1985 Racowsky, C and R.A. Satterlie. Metabolic and electrical coupling between hamster oocytes and cumulus cells during meiotic maturation in vivo and in vitro. *Dev. Biol.* **108**: 191-202.
- 1987 Racowsky, C. and R.A. Satterlie. Decreases in heterologous metabolic and dye-coupling, but not electrical coupling, accompany meiotic resumption in hamster oocyte-cumulus complexes. *Europ. J. Cell Biol.* **43**: 283-292.
- 1987 Satterlie, R.A. and A.N. Spencer. Organization of conducting systems in "simple" invertebrates: Porifera Cnidaria and Ctenophora. IN M.A. Ali (ed.) Nervous Systems of Invertebrates. Plenum, New York. pp. 213-264.
- 1989 Satterlie, R.A. Reciprocal inhibition and rhythmicity: Swimming in a pteropod mollusc. IN J. Jacklet (ed) Cellular and Neuronal Oscillators. Marcel Dekker, New York. pp. 151-171.
- 1989 Huang, Z. and R.A. Satterlie. Smooth muscle fiber types and a novel pattern of thick filaments in the wing of the pteropod mollusc Clione limacina. *Cell Tiss. Res.* **257**: 405-414.
- 1990 Huang, Z. and R.A. Satterlie. Neuronal mechanisms underlying behavioral switching in a pteropod mollusc. *J. Comp. Physiol. A.* **166**: 875-887.
- 1990 Satterlie, R.A., G.E. Goslow Jr. and A. Reyes. Two types of striated muscle suggest two-gear swimming in the pteropod mollusc Clione limacina. *J. Exp. Zool.*, **255**: 131-140.
- 1991 Satterlie, R.A.. Serotonin modulation of swimming speed in the pteropod mollusc Clione limacina. IN H. Boer and K. Kits (eds) Molluscan Neurobiology, North Holland Publishing Company, Amsterdam. pp. 38-42.
- 1991 Welsford, I.G., R.A. Meyers, D.S. Wilson, R.A. Satterlie and G.E. Goslow Jr. Neuromuscular organization for "wing" control in a mollusc (Clione limacina) and a bird (Columba livia); Parallels in design. *Amer. Zool.* **31**: 670-679.
- 1991 Satterlie, R.A., Neural control of speed changes in an opisthobranch locomotory system. *Biol. Bull.* **180**: 228-233.
- 1991 Satterlie, R.A., Electrophysiology of swim musculature in the pteropod mollusc Clione limacina. *J. Exp. Biol.* **159**: 285-301.
- 1991 Norekian, T.P. and R.A. Satterlie, Neural analysis of hunting behavior of pteropod mollusk Clione limacina. *J. Higher Activity (U.S.S.R., In Russian)*. **41**: 982-997.
- 1992 Hermans, C.O. and R.A. Satterlie. Fast-strike feeding behavior in a Pteropod Mollusc, Clione limacina Phipps. *Biol. Bull.* **182**: 1-7.
- 1993 Norekian, T.P. and R.A. Satterlie. Cerebral neurons underlying prey capture movements in the pteropod mollusc, Clione limacina. I. Physiology, morphology. *J. Comp. Physiol.* **172**: 153-169.
- 1993 Norekian, T.P. and R.A. Satterlie. FMRFamide and GABA produce functionally opposite effects on the prey capture reactions in the pteropod mollusc Clione limacina. *Biol. Bull.* **185**: 248-262.
- 1993 Norekian, T.P. and R.A. Satterlie. Co-activation of antagonistic motoneurons as a mechanism of high-speed hydraulic inflation of prey capture appendages in the pteropod mollusc Clione limacina. *Biol. Bull.* **185**: 240-247.

- 1993 Satterlie, R.A.. Neuromuscular organization in the swimming system of the pteropod mollusc Clione limacina. J. Exp. Biol. **181**: 119-140.
- 1994 Norekian, T.P. and R.A. Satterlie. Small cardioactive peptide B increases the responsiveness of the neural system underlying prey capture reactions in the pteropod mollusc Clione limacina. J. Exp. Zool. **270**: 136-148.
- 1995 Satterlie, R.A., T.P. Norekian, S. Jordan and C.J. Kazilek. Serotonin modulation of swimming speed in the pteropod mollusc Clione limacina. I. Serotonin immunoreactivity in the central nervous system and wings. J. Exp. Biol. **198**: 895-904.
- 1995 Satterlie, R.A. Serotonergic modulation of swimming speed in the pteropod mollusc Clione limacina. II. Peripheral modulatory neurons. J. Exp. Biol. **198**: 905-916.
- 1995 Satterlie, R.A. and T.P. Norekian. Serotonergic modulation of swimming speed in the pteropod mollusc Clione limacina. III. Cerebral neurons. J. Exp. Biol. **198**: 917-930.
- 1995 Satterlie, R.A., M. Lagro, M. Titus, S. Jordan and K. Robertson. Morphology of wing mechanoreceptors involved in the wing retraction reflex in the pteropod mollusc Clione limacina. Mar. Freshwater Behav. & Physiol. **26**: 163-173.
- 1995 Satterlie, R.A. and A.E. Kammer. Invertebrate neuromuscular organization: Peripheral contributions to behavioral variability. Amer. Zool. **35**: 517-519.
- 1995 Satterlie, R.A. Peripheral variability in the locomotory system of the pteropod mollusc Clione limacina. Amer. Zool. **35**: 542-547.
- 1996 Norekian, T.P. and R.A. Satterlie. An identified cerebral interneuron initiates different elements of prey capture behavior in the pteropod mollusc, Clione limacina. Invert. Neurosci. **1**: 235-248.
- 1996 Norekian, T.P. and R.A. Satterlie. Whole body withdrawal circuit and its involvement in the behavioral hierarchy of the mollusk Clione limacina. J. Neurophys. **75**: 529-537.
- 1996 Norekian, T.P. and R.A. Satterlie. Cerebral serotonergic neurons reciprocally modulate swim and withdrawal neural networks in the mollusk Clione limacina. J. Neurophys. **75**: 538-546.
- 1997 Satterlie, R.A., T.P. Norekian and K.R. Robertson. Startle phase of escape swimming is controlled by pedal motoneurons in the pteropod mollusk Clione limacina. J. Neurophys. **77**: 272-280.
- 1997 Norekian, T.P. and R.A. Satterlie. Cholinergic activation of startle motoneurons by a pair of cerebral interneurons in the pteropod mollusk Clione limacina. J. Neurophys. **77**: 281-288.
- 1997 Satterlie, R.A. and T.P. Norekian. Modulation of swimming speed in the pteropod mollusc, Clione limacina: Role of a compartmental serotonergic system. J. Invert. Neurosci. **2**: 157-165.
- 1997 Norekian, T.P. and R.A. Satterlie. Distribution of myomodulin-like and buccalin-like immunoreactivities in the central nervous system peripheral tissues of the mollusc, Clione limacina. J. Comp. Neurol. **381**: 41-52.
- 2000 Satterlie, R.A. and T.P. Norekian. Serotonin-induced spike narrowing in a locomotor pattern generator permits increases in cycle frequency during accelerations. J. Neurophysiol. **83**: 2163-2170

- 2000 Moroz, L.L., T.P. Norekian, T.J. Pirtle, K.J. Robertson and R.A. Satterlie. Distribution of NADPH-Diaphorase reactivity and effects of nitric oxide on feeding and locomotory circuitry in the pteropod mollusc, *Clione limacina*. *J. Comp. Neurol.* **427**: 274-284.
- 2001 Satterlie, R.A. and T. Nolen. Why do cubomedusae have only four swim pacemakers? *J. Exp. Biol.* **204**: 1413-1419.
- 2001 Satterlie, R.A. and T.P. Norekian. Neuronal control of locomotory speed: The pteropod solution. *Amer. Zool.* **42**: 1001-1008.
- 2001 Norekian, T.P. and R.A. Satterlie. Serotonergic neural system not only activates swimming, but also inhibits competing neural centers in a pteropod mollusc. *Amer. Zool.* **42**: 993-1000.
- 2001 Satterlie, R.A. Swimming in Opisthobranch Mollusks: Introduction to the Symposium. *Amer. Zool.* **42**: 939-942.
- 2002 Satterlie, R.A. Control of Swimming in Jellyfish: A Comparative Story. *Can. J. Zool.* **80**: 1654-1669.
- 2004 Satterlie, R.A. and R.L. Cooper. Recent developments in neurobiology: Introduction to the symposium. *Integrat. Comp. Biol.* **44**: 1-3.
- 2004 Pirtle, T.J. and R.A. Satterlie. Cellular mechanisms underlying swim acceleration in pteropod mollusk, *Clione limacina*. *Integrat. Comp. Biol.* **44**: 37-46.
- 2004 Satterlie, R.A., K.S. Thomas and G.C. Gray. Muscle organization of the cubozoan jellyfish *Tripedalia cystophora* Conant 1897. *Biol. Bull.* **209**: 154-163.
- 2005 Pirtle, T.J. and R.A. Satterlie. Role of the type-12 interneurons in swim acceleration in *Clione limacina*. *Invert. Neurosci.* **6**: 161-168.
- 2007 Nishikawa, K., A.A. Biewener, P. Aerts, A.N. Ahn, H.J. Chiel, M.A. Daley, T.L. Daniel, R.J. Full, M.E. Hale, T.L. Hedrick, D.E. Koditschek, A.K. Lappin, T.R. Nichols, R.D. Quinn, R.E. Ritzmann, R.A. Satterlie, and B. Szymik. Neuromechanics: An integrative approach for understanding motor control. *Int. Comp. Biol.* *In press*.
- 2007 Satterlie, R.A. Recent developments in neurobiology: Introduction to the symposium honoring Professor Douglas G. Stuart. *Int. Comp. Biol.* *In press*.
- 2007 Satterlie, R.A. Marine Science. (book, from the multi-volume Encyclopedia of Science and Technology). Facts-On-File. *In Press*.

#### SPECIALIZED PUBLICATIONS

- 1978 Satterlie, R.A. and A.N. Spencer. Matters arising reply (to J.L. Leonard, "Cubomedusae belong to the Class Cubozoa, not Scyphozoa). *Nature* **234**: 377.
- 1990 Satterlie, R.A. Book Review of "Pelagic Snails. The Biology of Holoplanktonic Gastropod Molluscs" by C.M. Lalli and W. Gilmer. *Quart. Rev. Biol.* **65**: 518-519

#### OTHER CREATIVE ACTIVITIES

- 2006 *Phoenix* Novel (Historical) Whiskey Creek Press
- 2006 *The Stick*, in *Fear: Anthology of Horror and Suspense* (multi-author Anthology) Whiskey Creek Press
- 2007 *Something Bad* Novel (Horror) *In Press*, Medallion Press

- 2007 *Rollicking Anthropomorphisms and Other Observations on the Human Condition*  
(Poetry Collection) *Under Contract*, Whiskey Creek Press.
- 2008 *Family Secrets* Novel (Mystery) *Under Contract*, Medallion Press
- 2009 *Imola* Novel (Psychological Suspense) *Under Contract*, Medallion Press

Fiction Award—*Phoenix* tied for third place in the Historical Fiction category of the 2004 Paul Gillette Memorial Writing Contest (national writing contest run by the Pikes Peak Writers)

Fiction Award—The *Fear Anthology* was one of two finalists for a EPPIE award (Horror category) through the Electronically Published Internet Connection (EPIC) – The EPPIEs are the major annual awards for e-books.

Fiction Award—*Phoenix* is one of four finalists in the “Published Fiction” category of the Arizona Authors Association’s annual writing awards.