

July, 2010

**Stephen Nowicki**  
*CURRICULUM VITAE*

**Education:**

B.S.	Tufts University, <i>summa cum laude</i>	1976
M.S.	Tufts University	1978
Ph.D.	Cornell University	1985
	Institute for Management and Leadership in Education Harvard University	2010

**Professional Positions:**

Dean and Vice Provost for Undergraduate Education, Bass Fellow and Professor,  
Duke University (appointments in Biology and Psychology in Trinity College,  
and in Neurobiology, Duke Medical Center), 2007 – present  
Dean of the Natural Sciences, Duke University, 2004 – 2007  
Anne T. and Robert M. Bass Professor, 1999 – 2004  
Gästforskare, Ekologiska Institutet, Lund University, Sweden, 1999  
Associate Professor, Duke University, 1994 – 2002  
Assistant Professor, Duke University, 1989 – 1994  
Assistant Professor, Rockefeller University, 1986 – 1989  
Postdoctoral Research Fellow, Rockefeller University, 1984 – 1986

**Honors:**

Klaus Immelmann Lectureship, Bielefeld University, Germany, 2006  
Distinguished Scientist Lectureship, Trinity University, 2006  
Eminent Biologist Lectureship, Pittsburgh EcoForum, 2001  
John Simon Guggenheim Fellow, 1999–2000  
Bass Society of Fellows, Duke University, 1999–present  
Elected Fellow, Animal Behavior Society, 1998  
Alfred P. Sloan Foundation Fellow, 1990–1992  
Kenneth Roeder Memorial Lectureship, Tufts University, 1990  
Mary Flagler Cary Charitable Trust Fellowship, 1987–1989  
Henry Sage Fellowship, Cornell University, 1982–1983  
Andrew D. White Fellowship, Cornell University, 1977–1981  
Sigma Xi, Cornell University, 1980  
Phi Beta Kappa, Tufts University, 1975

**Grants and Awards:**

National Science Foundation, “Selective pressures shaping aggressive behavior in  
females: an experimental approach” (IOS-0710118, with K. Rosvall), 2007–2009  
National Science Foundation, “Developmental and receiver-dependent costs of avian  
signals” (IBN-0315377), 2003–2007

- National Science Foundation, "Sources of selection on song in white-crowned sparrows (*Zonotrichia leucophrys*)" (IOS-0508611, with E. Derryberry), 2005–2007
- P.H.S., National Institutes of Neurological Disorders and Stroke, "Single neuron correlates of learned song" P.I.: R. Mooney (R21 NS046583-01), 2003–2005
- National Science Foundation, "Implications of production constraints for the function of vocal performance in mate choice" (IBN-0407966, with B. Ballentine), 2004–2006
- National Science Foundation, "Fitness cost of nest defense in a passerine bird: A trade-off with offspring care" (IBN-0407952, with R. Duckworth), 2004–2006
- National Science Foundation, "Complexity and information in avian signals" (IBN-9974743), 1999–2003
- National Science Foundation, "Function of multiple signals in avian vocal communication" (IBN-0104973, with M. Beebe), 2001–2003
- National Science Foundation, "Sound production in spiny lobsters (Paninuridae): morphological constraints and the evolution of signal diversity" (IBN-9972597, with S. Patek), 1999–2001
- John Simon Guggenheim Foundation, "Nutrition and song learning in birds," 1999–2000
- National Science Foundation, "Perception, function and development of complex vocal signals" (IBN-9408360), 1995–1999
- National Science Foundation, "Functional analysis of female reproductive coloration" (IBN-9623869, with S. Weiss), 1996–1999
- P.H.S., National Institutes of Deafness and Communicative Disorders, "Comparative study of mechanisms of vocal production" (R01 DC-00402-06), 1992–1996
- P.H.S., National Institutes of Deafness and Communicative Disorders, "Comparative study of mechanisms of vocal production" ("FIRST" award, R29 DC-00402-01), 1987–1992
- National Science Foundation, "Undergraduate neurosciences summer program in mechanisms of behavior" with W.G. Hall & M.M. Nijhout, 1993–1996; with W. Meck (DBI-98320514), 1997–2001
- Alfred P. Sloan Foundation Fellowship Award, 1990–1992
- Duke University Research Council Awards, 1990, 1991, 1992, 1998
- Irma T. Hirschl Foundation Career Scientist Award, 1987–1989
- Whitehall Foundation Grant-in-Aid, 1986
- U.S.P.H.S. Postdoctoral Research Fellowship, 1984–1986
- U.S.P.H.S. Predoctoral Research Fellowship, 1983–1984

**Professional Service:**

- Consortium on Financing Higher Education, Assembly Representative, 2009–present
- Chair, Programming Committee, 2010–2011
- Animal Behavior Society, Presidential Cycle, 2003–2007
- Animal Behavior Society, Executive Committee Member-at-Large, 2000–2003
- National Science Foundation, IBN/IOS Proposal Review Panels, 1999–2002, 2004
- National Science Foundation, IGERT Proposal Review Panel, 2001
- National Science Foundation, Graduate Fellowship Review Panel, 1999
- Leiden University, Institute of Biology, External Ph.D. Examiner, 2004

Copenhagen University, Zoological Institute, External Ph.D. Examiner, 2001, 2002  
National Institute of Mental Health, Psychobiology, Behavior and Neuroscience  
Proposal Review Committee, 1994–1998  
Society for Integrative and Comparative Biology, Division of Animal Behavior,  
Chair, 1996–2000  
Project Kaleidoscope Consultant, 1997–1998

***Invited Research Lectures (last 5 years):***

Binghamton University, 2010  
Wesleyan University, 2009  
University of Michigan, 2009  
Cambridge University, 2008 (Templeton Symposium)  
Princeton University, 2008 (Balzan Conference)  
Rockefeller University, 2008  
University of Florida, 2008  
College of Charleston, 2008  
John Hope Franklin Humanities Institute, Duke University, 2007  
North Carolina Museum of Natural History, Raleigh, NC, 2007  
Clemson University, 2007  
University of Nebraska, 2007  
Bielefeld University, Germany, 2006  
University of Miami, 2006  
Emory University, 2006  
Trinity University, San Antonio, TX, 2006  
Lund University, Sweden, 2005  
Nasher Museum of Art, Duke University, 2005  
University of Western Ontario, Canada, 2005  
Princeton University, 2005  
Rutgers University, 2005

***Teaching – Awards and Other Activities:***

Robert B. Cox Trinity College Distinguished Teaching Award, 1992–1993  
National Science Foundation Chautauqua Short Course for College Teachers:  
"Mechanisms of Animal Behavior," Organizer and Instructor, 1994  
Duke/Durham Fellows Seminar, 1993–1994  
Isle of Shoals Marine Laboratory, Lecturer, 1985–1988, 1990  
Rocky Mountain Biological Laboratory, Instructor, 1983, 1984

***Teaching – Duke University Courses:***

How Darwin and DNA Changed the World (Bio 95S), 2009–present  
Translating Science (Bio 93S), 2006–present  
Foundations of Behavioral Ecology (Bio 277), 2004  
Introductory Biology (Bio 25), 1996–2003, 2007

Animal Communication and Social Behavior (Bio 276), 1992–2005  
Population, Community and Behavioral Ecology (UPE 301), 2000–2002  
Integrative Biology: The View from the Organism (Bio 296), 1992  
Principles of Neurobiology (Bio 154), 1990–1995

**University Service:**

Duke University Basketball Pep Band, 2004–2006, 2007–present  
Consortium on Financing Higher Education, Assembly Representative, 2009–present  
Financial Aid Director Search Committee, Chair, 2008  
Vice President for Public and Government Search Committee, 2007  
Southern Association of Colleges and Schools Reaccreditation,  
Quality Enhancement Plan Committee, 2007–2009  
Campus Culture Initiative Task Force, 2006–2007  
Oak Ridge National Laboratory Liaison, 2004–2007  
Information Science/Information Studies, Faculty Board Member, 2003–2005  
University Curriculum 2000 Review Committee, *Chair*, 2003–2004  
Bass Chair Selection Committee, 2002–2004  
Primate Center Internal Advisory Committee, 2002–2004  
University Union Board, 2002–2004  
Center for Cognitive Neuroscience Director Search Committee, 2002–2003  
Academic Council, 1991–1992, 1994–1995, 1998–2004  
Executive Committee, 1998–2000  
Board of Trustees Student Affairs Committee, Faculty Representative, 1999–2002  
Vice President for Student Affairs Search Committee, Co-chair, 2000–2001  
University Writing Program Task Force, 1998–1999  
Center for Teaching, Learning and Writing Director Search Committee, 1998–1999  
Undergraduate Neurosciences Program, Co-Director, 1992–2004  
Southern Association of Colleges and Schools Reaccreditation Steering Committee,  
Undergraduate Education Subcommittee, Chair, 1996–1998  
University Task Force on Reorganization of the Biological Sciences, 1996–1997  
Faculty Associates Program (Pegram Residence Hall), 1996–1997  
Executive Committee of the Graduate School, 1994–1996  
Institutional Animal Care and Use Committee, 1989–1994; *Vice Chair*, 1991–1994;  
AAALAC Subcommittee, 1992; DLAR Director Search Committee, 1993

**PUBLICATIONS:**

**BOOKS AND OTHER MAJOR PUBLISHED WORK:**

Nowicki, S. 2008. *Biology*. Holt-McDougal (Houghton Mifflin Harcourt): Austin, TX.  
[An introductory biology text book for high school students.]  
Searcy, W. A. & S. Nowicki. 2005. *The Evolution of Animal Communication: Reliability and Deception in Signaling Systems*. Princeton University Press: Princeton, NJ.  
Nowicki, S. 2004. *Biology: The Science of Life*. The Teaching Company: Chantilly, VA.  
[72 half-hour lectures available on CD and DVD.]

**JOURNAL ARTICLES AND BOOK CHAPTERS:**

- Anderson, R. C., S. Peters & S. Nowicki. Learned song preference by a female songbird generalizes to novel songs in adulthood. *Biology Letters*, *in review*.
- DuBois, A., S. Nowicki & W. A. Searcy. Discrimination of vocal performance by male swamp sparrows. *Behav. Ecol. Sociobiol.*, in press.
- Lachan, R. F. & S. Nowicki. Can assessment of song learning accuracy be a reliable signaling system? *Evolution*, in press.
- Nowicki, S. & W. A. Searcy. Are better singers smarter? *Behav. Ecol.*, in press.
- Prather, J.F., S. Peters, S. Nowicki & R. Mooney. Persistent representation of juvenile experience in the adult songbird brain. *J. Neurosci.*, in press.
- Searcy, W. A., S. Peters, S. Kipper & S. Nowicki. Female sparrows use song to assess male developmental history. *Behav. Ecol. Sociobiol.*, in press.
- DuBois, A., S. Nowicki & W. A. Searcy. 2009. Swamp sparrows modulate vocal performance in an aggressive context. *Biology Letters* 5: 163-165.
- Prather, J. F., S. Nowicki, R. C. Anderson, S. Peters & R. A. Mooney. 2009. Neural correlates of categorical perception in learned vocal communication. *Nature Neuroscience* 12: 121-128.
- Searcy, W. A. & S. Nowicki. 2009. Consequences of brain development for sexual signalling in songbirds. In: Dukas, R & J. Ratcliffe (eds.) *Cognitive Ecology II*, University of Chicago Press, Chicago, pp 71-87.
- Searcy, W. A. & S. Nowicki. 2009. Sexual selection and the evolution of animal signals. In: Larry R. Squire (Ed.) *Encyclopedia of Neuroscience*, vol. 8, pp. 769-776, Academic Press: Oxford.
- Anderson, R. C., W. A. Searcy, S. Peters & S. Nowicki. 2008. Soft song in song sparrows: acoustic structure and implications for signal function. *Ethology* 114: 662-676.
- Anderson, R. C., W. A. Searcy & S. Nowicki. 2008. Testing the function of song matching in birds: responses of eastern male song sparrows *Melospiza melodia* to partial song matching. *Behaviour* 154: 347-363.
- Ballentine, B., W. A. Searcy & S. Nowicki. 2008. Reliable aggressive signalling in swamp sparrows. *Anim. Behav.* 75: 693-703.
- Prather, J. F., S. Peters, S. Nowicki & R. Mooney. 2008. Precise auditory-motor mirroring in neurons for learned vocal communication. *Nature* 451: 305-310.
- Searcy, W. A., R. C. Anderson & S. Nowicki. 2008. Is bird song a reliable signal of aggressive intent? A reply. *Behav. Ecol. Sociobiol.* 62: 1213-1216.
- Searcy, W. A. & S. Nowicki. 2008. Bird song and the problem of signal reliability. *Amer. Scientist* 96: 114-121.
- Anderson, R., S. Nowicki & W. A. Searcy. 2007. Soft song in song sparrows: response of males and females to an enigmatic signal. *Behav. Ecol. Sociobiol.* 61: 1267-1274.
- Hughes, M., R. C. Anderson, W. A. Searcy, L. M. Bottensek & S. Nowicki. 2007. Song type sharing and territory tenure in eastern song sparrows: implications for the evolution of song repertoires. *Anim. Behav.* 73: 701-710.
- Searcy, W. A. & S. Nowicki. 2006. Signal interception and the use of soft song in aggressive interactions. *Ethology* 112: 865-872.

- Searcy, W. A., R. Anderson & S. Nowicki. 2006. Bird song as a signal of aggressive intent. *Behav. Ecol. Sociobiol.* 160: 234-241.
- Nowicki, S. & W. A. Searcy. 2005. Adaptive priorities in brain development: Theoretical comment on Pravosudov (2005). *Behav. Neurosci.*, 119: 1415-1418.
- Anderson, R. C., W. A. Searcy & S. Nowicki. 2005. Partial song matching in an eastern population of song sparrows (*Melospiza melodia*). *Anim. Behav.*, 69: 189-196.
- Nowicki, S. & W. A. Searcy. 2005. Song and mate choice in birds: How the development of behavior helps us understand function. *Auk*, 122: 1-14.
- Ballentine, B., J. Hyman & S. Nowicki. 2004. Singing performance influences female response to male bird song: an experimental test. *Behav. Ecol.*, 15: 163-168.
- Hyman, J., M. Hughes, W. A. Searcy & S. Nowicki. 2004. Individual variation in the strength of territory defense in song sparrows: correlates of age, territory tenure, and neighbor aggressiveness. *Behaviour*, 141: 15-27.
- Nowicki, S. & W. A. Searcy. 2004. Song function and the evolution of female preferences: Why birds sing and why brains matter. *Ann. N.Y. Acad. Sci.*, 1016: 704-723.
- Podos, J. & S. Nowicki. 2004. Beaks, adaptation, and vocal evolution in Darwin's finches. *BioScience* 54: 501-510.
- Podos, J. & S. Nowicki. 2004. Performance limits on birdsong production. In: Marler, P & H. Slabbekoorn (Eds.) *Nature's Music: The Science of Birdsong*, pp. 318-341. Elsevier/Academic Press: New York.
- Podos, J., S. Peters & S. Nowicki. 2004. Calibration of song learning targets during vocal ontogeny in swamp sparrows (*Melospiza georgiana*). *Anim. Behav.* 68: 929-940.
- Searcy, W. A., S. Peters & S. Nowicki. 2004. Effects of early nutrition on growth rate and adult size in song sparrows. *J. Avian Biol.*, 35: 269-279.
- Searcy, W.A., S. Nowicki & S. Peters. 2003. Phonology and dialect discrimination in song sparrows (*Melospiza melodia*). *Ethology* 109: 23-35.
- Nowicki, S., W. A. Searcy & S. Peters. 2002. Brain development, song learning and mate choice in birds: a review and experimental test of the "nutritional stress hypothesis." *J. Comp Physiol. A* 188: 1003-1014.
- Nowicki, S., W. A. Searcy & S. Peters. 2002. Quality of song learning affects female response to male bird song. *Proc. Roy. Soc. Lond. B* 269: 1949-1954.
- Nowicki, S, W.A. Searcy, T. Krueger & M. Hughes. 2002. Individual variation in response to simulated territorial challenge among territory-holding song sparrows. *J. Avian Biol.* 33: 253-259.
- Searcy, W.A., S. Nowicki, M. Hughes & S. Peters. 2002. Geographic song discrimination in relation to dispersal distances in song sparrows. *Amer. Natur.* 159: 221-230.
- Hoese, W.J. & S. Nowicki. 2001. Using "the organism" as a conceptual focus in an introductory biology course. *Amer. Biol. Teacher* 63: 176-182.
- Mooney, R., W.J. Hoese & S. Nowicki. 2001. Auditory representation of the vocal repertoire in a songbird with multiple song types. *Proc. Natl. Acad. Sci. USA* 98: 12798-12783.
- Nowicki, S., W. A. Searcy, M. Hughes & J. Podos. 2001. The evolution of bird song: male and female response to song innovation in swamp sparrows. *Anim. Behav.* 62: 1189-1195.

- Hoese, W.J., J. Podos, N.C. Boetticher & S. Nowicki. 2000. Vocal tract function in birdsong production: experimental manipulation of beak movements. *J. Exp. Biol.* 203: 1845-1855.
- Nowicki, S., D. Hasselquist, S. Bensch & S. Peters. 2000. Nestling growth and song repertoire size in great reed warblers: evidence for song learning as an indicator mechanism in mate choice. *Proc. Roy. Soc. Lond. B* 267: 2419-2424.
- Peters, S., W.A. Searcy, M.D. Beecher & S. Nowicki. 2000. Geographic variation in the organization of song sparrow repertoires. *Auk* 117: 936-942.
- Podos, J. & S. Nowicki. 2000. Mechanical limits and the evolution of vocalizations in birds. In: Maria Alice dos Santos Alves, et al. (Eds.) *A Ornithologia no Brasil: Pesquisa Atual e Perspectivas*, do Congresso Brasileiro de Ornitologia, pp. 251-271. EdUERJ: Rio de Janeiro.
- Searcy, W.A. & S. Nowicki. 2000. Male-male competition and female choice in the evolution of vocal signaling. In: Y. Espmark, T. Amundsen & G. Rosenqvist (Eds.) *Animal Signals: Signalling and Signal Design in Animal Communication*, pp. 301-315. Tapir Academic Press: Trondheim.
- Searcy, W.A., S. Nowicki & C. Hogan. 2000. Song type variants and aggressive signaling. *Behav. Ecol. Sociobiol.* 48: 358-363.
- Nowicki, S., S. Peters, W.A. Searcy & C. Clayton. 1999. The development of song variation in song sparrows. *Anim. Behav.* 57: 1257-1264.
- Podos, J., S. Nowicki & S. Peters. 1999. Permissiveness in vocal syntax learning in the swamp sparrow. *Anim. Behav.* 58: 93-103.
- Searcy, W.A. & S. Nowicki. 1999. Functions of song variation in song sparrows. In: M. Konishi & M. Hauser (eds.) *The Design of Animal Communication*, pp. 577-595. MIT Press: New York.
- Searcy, W.A., S. Nowicki & S. Peters. 1999. Song types as fundamental units in vocal repertoires. *Anim. Behav.* 58: 37-44.
- Nowicki, S., S. Peters & J. Podos. 1998. Song learning, early nutrition and sexual selection in songbirds. *Amer. Zool.* 38: 179-190.
- Nowicki, S., W.A. Searcy & M. Hughes. 1998. The territory defense function of song in song sparrows: a test with the speaker occupation design. *Behaviour* 135: 615-628.
- Hughes, M., S. Nowicki, W.A. Searcy & S. Peters. 1998. Song type sharing in song sparrows: Implications for repertoire function and song learning. *Behav. Ecol. Sociobiol.* 42: 437-446.
- Hughes, M., S. Nowicki & B. Lohr. 1998. Call learning in black-capped chickadees (*Parus atricapillus*): The role of experience in the development of "chick-a-dee" calls. *Ethology* 104: 232-249.
- Erickson, C. J., S. Nowicki, L. Dollar & N. Goehring. 1998. Percussive foraging: Stimuli for prey location by aye-ayes (*Daubentonia madagascariensis*). *Int. J. Primatol.* 19: 111-122.
- Gaunt, A.S. & S. Nowicki. 1998. Birdsong: acoustics and physiology revisited. In: Hopp, S. L. M. J. Owren & C. S. Evans (eds.), *Animal Acoustic Communication*, Springer-Verlag, Heidelberg, pp. 291-321.
- Searcy, W.A., M. Hughes & S. Nowicki. 1997. The response of male and female song sparrows to geographic variation in song. *Condor* 99: 651-657.

- Nowicki, S. 1997. Bird acoustics. In: M. J. Crocker (ed.) *Encyclopedia of Acoustics*. John Wiley & Sons, New York, Chapter 150, pp. 1813-1817.
- Peters, S. & S. Nowicki. 1996. Development of tonal quality in birdsong: Further evidence from song sparrows. *Ethology* 102: 323-335.
- Strote, J. & S. Nowicki. 1996. Responses to songs with altered tonal quality by adult song sparrows (*Melospiza melodia*). *Behaviour* 130: 1-15.
- Podos, J., J. K. Shearer, S. Peters & S. Nowicki. 1995. Ontogeny of vocal tract movements during song production in song sparrows. *Anim. Behav.* 50: 1287-1296.
- Searcy, W.A., J. Podos, S. Peters & S. Nowicki. 1995. Discrimination of song types and variants in song sparrows. *Anim. Behav.* 49: 1219-1226.
- Lohr, B., R. Weisman & S. Nowicki. 1994. The role of pitch cues in song recognition by Carolina chickadees (*Parus carolinensis*). *Behaviour* 130: 1-15.
- Nowicki, S., J. Podos & F. Valdés. 1994. Temporal patterning of within-song type and between-song type variation in song repertoires. *Behav. Ecol. Sociobiol.* 34: 329-335.
- Nowicki, S. & J. Podos. 1993. Complexity, coupling and contingency in birdsong. In: *Perspectives in Ethology*, vol.10 (P.P.G. Bateson, P. Klopfer & N. Thompson, eds.), pp. 159-186, Plenum Press, New York.
- Westneat, M.W., J.H. Long, Jr., W. Hoese & S. Nowicki. 1993. Kinematics of birdsong: Functional correlation of cranial movements and acoustic features in sparrows. *J. Exp. Biol.* 182: 147-171.
- Jacobs, M., D.P. Nowacek, G. Cannon, S. Nowicki & R.B. Forward. 1993. Seasonal changes in vocalizations during behavior of the Atlantic bottlenose dolphin. *Estuaries* 16: 241-246.
- Nowicki, S., M. Westneat & W. Hoese. 1992. Birdsong: Motor function and the evolution of communication. *Seminars in Neurosci.* 4: 385-390.
- Nowicki, S., P. Marler, A. Maynard & S. Peters. 1992. Is the tonal quality of birdsong learned? Evidence from song sparrows. *Ethology* 90: 225-235.
- Peters, S., P. Marler & S. Nowicki. 1992. Song sparrows learn from limited exposure to song models. *Condor* 94: 1016-1019.
- Podos, J., S. Peters, T. Rudnicki, P. Marler & S. Nowicki. 1992. The organization of song repertoires in song sparrows: Themes and variations. *Ethology* 90: 89-106.
- Nowicki, S., M. Hughes & P. Marler. 1991. Flight songs of swamp sparrows: Alternative phonology of an alternative song category. *Condor* 93: 1-11.
- Lohr, B., S. Nowicki & R. Weisman. 1991. Pitch production in Carolina chickadee songs. *Condor* 93: 197-199.
- Nowicki, S. & D.A. Nelson. 1990. Defining natural categories in acoustic signals: Comparison of three methods applied to 'chick-a-dee' call notes. *Ethology* 86: 89-101.
- Ball, G.F. & S. Nowicki. 1990. Assessment of song quality in photorefractory and photosensitive song sparrows. *Anim. Behav.* 40: 986-987.
- Nowicki, S. & G.F. Ball. 1989. Testosterone induction of song in photosensitive and photorefractory male sparrows. *Horm. and Behav.* 23: 514-525.
- Nowicki, S. J.C. Mitani, D.A. Nelson & P. Marler. 1989. The communicative significance of tonality in birdsong: Responses to songs produced in helium. *Bioacoustics* 2: 35-46.

- Nowicki, S. 1989. Vocal plasticity in captive black-capped chickadees: The acoustic basis and rate of call convergence. *Anim. Behav.* 37: 64-73.
- Nowicki, S. & P. Marler. 1988. How do birds sing? *Music Perception* 5: 391-426.
- Nowicki, S. 1987. Vocal tract resonances in oscine bird sound production: evidence from birdsongs in a helium atmosphere. *Nature* 325: 53-55.
- Nowicki, S. & R.R. Capranica. 1986. Bilateral syringeal coupling during phonation of a songbird. *J. Neuroscience* 6: 3595-3610.
- Nowicki, S. & R.R. Capranica. 1986. Bilateral syringeal interaction in the vocal production of an oscine bird sound. *Science* 231: 1297-1299.
- Nowicki, S. 1985. Spider. In: *McGraw-Hill Yearbook of Science and Technology* (S.P. Parker, editor-in-chief), pp. 410-412, New York: McGraw-Hill Inc.
- Nowicki, S. 1984. A question of identity: the call of the black-capped chickadee. *Living Bird Quart.* 3(1): 30.
- Nowicki, S. 1983. Flock-specific recognition of chickadee calls. *Behav. Ecol. Sociobiol.* 12: 317-320.
- Eisner, T. & S. Nowicki. 1983. Spider web protection through visual advertisement: The role of the "stabilimentum." *Science* 219: 185-187.
- Nowicki, S. & T. Eisner. 1983. Predatory capture of bombardier beetles by a tabanid fly larva. *Psyche* 90: 119-122.
- Jackman, R., S. Nowicki, D.J. Aneshansley & T. Eisner. 1983. Predatory capture of toads by fly larvae. *Science* 222: 515-516.
- Jefson, M., J. Meinwald, S. Nowicki, K. Hicks & T. Eisner. 1983. Chemical defense of a rove beetle (*Creophilus maxillosus*). *J. Chem. Ecol.* 9: 159-180.
- Jain, S.C., S. Nowicki, T. Eisner & J. Meinwald. 1982. Insect repellents for vetiver oil: Zizanal and epizizanal. *Tetr. Letters* 23: 4639-4642.
- Mammen, D.L. & S. Nowicki. 1981. Individual differences and within-flock convergence in chickadee calls. *Behav. Ecol. Sociobiol.* 9: 179-186.
- Eisner, T., S. Nowicki, M. Goetz & J. Meinwald. 1980. Red cochineal dye (Carminic acid): Its role in nature. *Science* 208: 1038-1040.
- Nowicki, S. & K.B. Armitage. 1979. Behavior of juvenile yellow-bellied marmots: Play and social integration. *Z. Tierpsychol.* 51: 85-105.

**ABSTRACTS AND CONFERENCE PRESENTATIONS (last 5 years & selected earlier):**

- Anderson, R., S. Peters & S. Nowicki. 2010. Female songbirds do more than memorize: learned geographic discrimination generalizes to unfamiliar songs. Animal Behavior Society Annual Meeting, College of William and Mary, VA.
- DuBois, A., S. Nowicki & W. A. Searcy. 2010. Discrimination of vocal performance by male swamp sparrows. Animal Behavior Society Annual Meeting, College of William and Mary, VA.
- Nowicki, S. 2010. Making behavior part of introductory biology, in college and in high school. Animal Behavior Society Annual Meeting, College of William and Mary, VA.
- Nowicki, S., R. Anderson, J. Prather, S. Peters & R. Mooney. 2008. Categorical perception of birdsong: Cultural variation in perceptual boundaries. Animal Behavior Society Annual Meeting, Snowbird, Utah.

- Nowicki, S. & W. A. Searcy. 2007. Functional consequences of adaptive priorities in brain development for signaling and sexual selection. Animal Behavior Society Annual Meeting, Burlington, Vermont.
- Nowicki, S. 2007. Why good students sometimes fail their first college biology course. Association of Supervision and Curriculum Development. Los Angeles, CA.
- Kipper, S. A., S. Peters, W. A. Searcy & S. Nowicki. 2006. Effects of early nutritional stress on female swamp sparrows. 11th Biennial Congress of the International Society for Behavioral Ecology, Tours, France.
- Hughes, M., R. Anderson, W. A. Searcy & S. Nowicki. 2006. Song type sharing and territory tenure in Eastern song sparrows. Animal Behavior Society Annual Meeting, Snowbird, Utah.
- Searcy, W. A., S. Nowicki & R. Anderson. 2006. Signal interception and the use of soft song in aggressive interactions. Animal Behavior Society Annual Meeting, Snowbird, Utah.
- Nowicki, S. 2005. Priorities in brain development: Lessons from wild birds. Brain Plasticity: Change and Control Workshop. Lund University, Lund, Sweden.
- Anderson, R., W. A. Searcy & S. Nowicki. 2005. Costs and benefits of soft song as an aggressive signal in song sparrows: male response. Animal Behavior Society Annual Meeting, Snowbird, Utah.
- Nowicki, S., R. Anderson & W. A. Searcy. 2005. Costs and benefits of soft song as an aggressive signal in song sparrows: female response. Animal Behavior Society Annual Meeting, Snowbird, Utah.
- Kipper, S., S. Peters, W. A. Searcy & S. Nowicki. 2005. Effects of early nutritional stress on female swamp sparrows. Animal Behavior Society Annual Meeting, Snowbird, Utah.
- Nowicki, S. & P. K. Stoddard (co-organizers) 2002. "New Perspectives on Mechanisms of Evolution in Communication Systems," Symposium, Animal Behavior Society Annual Meeting, Indiana University, Bloomington, IN.
- Nowicki, S. 1997. Song learning, song variation and sexual selection. Invited paper at the 1st International Workshop on "Signal Sequence and Sense," Freie Universität, Berlin, Germany.
- Nowicki, S. 1997. The process of changing an introductory course at a major research university. Invited workshop presentation, Project Kaleidoscope Workshop "Enhancing learning-centered environments," University of Wisconsin, Madison, WI.
- Nowicki, S. and S. Peters. 1996. Song learning, early nutrition and sexual selection. Invited paper in the symposium: "Animal Behavior: Integration of Proximate and Ultimate Causation" Society for Integrative and Comparative Biology Annual Meeting, Albuquerque, NM.
- Hauser, M.D., J. Locke & S. Nowicki (co-organizers) 1993. "Human and Nonhuman Vocal Communication: Sources of Convergence and Divergence," Symposium, Animal Behavior Society 30th Annual Meeting, University of California, Davis.

#### **PH.D. DISSERTATIONS AND POSTDOCTORAL STUDENTS SUPERVISED:**

Mark Westneat, postdoc 1991 – 1992; Present position: Curator, Field Museum of Natural History & Lecturer, Organismal Biology and Anatomy, University of Chicago

- Melissa Hughes, postdoc 1994 – 1996; Present position: Associate Professor, Department of Biology, College of Charleston
- Bernard Lohr, Ph.D. 1995; Dissertation: Production and recognition of acoustic frequency cues in chickadees; Present position: Assistant Professor, Department of Biological Sciences, University of Maryland, Baltimore County
- Jeffrey Podos, Ph.D. 1996; Dissertation: Performance limits on vocal evolution in songbirds (Passeriformes: Emberizidae); Present position: Professor, Department of Biology, University of Massachusetts, Amherst
- John Rowden, Ph.D. 1996; Dissertation: The evolution of display behavior in the parrot genus *Neophema* (Aves: Psittaciformes); Present position: Citizen Scientist Manager, New York City Audubon
- Tammy L. Windfelder, Ph.D. 1997; Dissertation: Polyspecific association and interspecific communication between two neotropical primates: saddle-back tamarins (*Saguinus fuscicollis*) and emperor tamarins (*Saguinus imperator*); Present position: Associate Professor, Department of Biology, Drew University
- William J. Hoese, Ph.D. 1998; Dissertation: Functional morphology and biomechanics of jaw operation in sparrows; Present position: Associate Professor, Department of Biological Sciences, California State University, Fullerton
- Denise S. Pope, Ph.D. 1998; Dissertation: The fiddler crab claw waving display: function and evolution of a sexually selected signal; Present position: Visiting Assistant Professor, Department of Biology, Mount Holyoke College
- Stacey L. Weiss, Ph.D. 1999; Dissertation: The function and regulation of reproductive color of female striped plateau lizards (*Sceloporus virgatus*); Present position: Assistant Professor, Department of Biology, University of Puget Sound
- Sheila Patek, Ph.D. 2001; Dissertation: Signal producing morphology and the evolution of Palinurid lobster acoustic communication; Present position: Assistant Professor, Department of Biology, University of Massachusetts, Amherst
- Christopher Sturdy, postdoc 2000 – 2002; Functional analysis of brainstem activity during singing in songbirds (with Dr. Richard Mooney); Present position: Associate Professor, Department of Psychology, University of Alberta
- Valerie B. Simon, Ph.D., 2002; Dissertation: Predation, risk assessment and signaling behavior in *Anolis* lizards; Present position: Boat-builder, Key West, FL.
- Martin D. Beebee, Ph.D., 2003; Song complexity and avian communication; Present position: Martin Beebee Photography, Forestville, CA
- Silke Kipper, postdoc 2004 – 2005; Categorical perception and mechanisms of mate choice in birds; Present position: Assistant Professor, Freie Universität Berlin
- Barbara E. Ballentine, Ph.D., 2006; Production constraints in assessment signaling and the evolution of birdsong; Present position: Assistant Professor, University of Western Georgia.
- Jeremy D. Hyman, postdoc 2002 – 2006; Intrasexual signaling and territoriality; Present position: Assistant professor, Department of Biology, Western Carolina University
- Renée Duckworth, Ph.D., 2006; Ecological determinants of population-level variation in aggression in bluebirds; Present position: Assistant Professor, University of Arizona
- Elizabeth Derryberry, Ph.D., 2007; Song evolution in white-crowned sparrows: Patterns and processes; Present position: Postdoctoral associate, Louisiana State University

Jonathan Prather, postdoc 2003 – 2009 (with Dr. Richard Mooney); Neurophysiological mechanisms of birdsong production and perception; Present position: Assistant Professor, University of Wyoming

Kim Rosvall, PhD., 2009; Costs and benefits of intrasexual aggression in females: An experimental approach; Present position: Postdoctoral associate, Indiana University

***Current Students and Postdocs:***

Rindy Anderson, postdoc 2006 – present

Rob Lachlan, postdoc 2007 – present

Kendra Sewall, postdoc 2010 – present

Irene Liu, Ph.D. expected 2012