

September 2015

CURRICULUM VITAE

H. JANE BROCKMANN

Professor Emeritus of Biology
University of Florida, Gainesville, Florida 32611-8525

PERSONAL

Telephone: (352) 392-1297; 376-0473; FAX: 352-392-3704; email: HJB@ufl.edu

EDUCATION

1967	B.S., Tufts University, Department of Biology, Medford, Massachusetts
1972	University of Maryland, Department of Zoology (1968-1969)
	M.S., University of Wisconsin, Madison, Department of Zoology (advisor: Jack P. Hailman)
1976	Ph.D., University of Wisconsin, Madison, Department of Zoology (advisor: Jack P. Hailman)

PRESENT ACADEMIC POSITION

2011-present	Emeritus Professor, University of Florida, Department of Biology
--------------	--

POSITIONS HELD

1976-1981	Assistant Professor, University of Florida, Department of Zoology
1981-1989	Associate Professor, University of Florida, Department of Zoology
1989-2011	Professor, University of Florida, Department of Biology
1985-1986	Visiting Research Biologist, Princeton University, Department of Biology
1981-2004	Affiliate Professor, Department of Psychology
1997-2002	Affiliate Professor, Department of Physiology, College of Veterinary Medicine, UF
1980-2011	Affiliate Professor, Department of Entomology, University of Florida
2000-2011	Affiliate Professor, Center for Women's Studies, University of Florida
1997-2001	Chair, Department of Zoology, University of Florida
2003-2004	Program Director, Animal Behavior Program, IBN, National Science Foundation
2006-2007	Associate Chair, Department of Zoology

FELLOWSHIPS

1968-1969	Woodrow Wilson National Fellowship, University of Maryland, Dept. of Zoology
1970-1972	Federal Water Quality Training Grant Traineeship, University of Wisconsin, Dept. of Zoology
1977-1978	National Science Foundation, NATO Postdoctoral Fellowship, Animal Behaviour Research Group, Oxford University, England (mentor: Richard Dawkins)
1983-1984	Sabbatical, Department of Zoology, University of Florida
1984	Visiting Fellow, Wolfson College, Oxford, England
1985-1986	National Science Foundation Visiting Professorship for Women, Depart. of Biol., Princeton Univ.
1994-1995	Sabbatical, Department of Zoology, University of Florida
1994	Visiting Scholar, Dept. Evolution and Ecology, University of California, Davis, CA

HONORS

1967	T. H. Carmichael and Emily Leonard Carmichael Scholarship in Physiol Psychol. Tufts Univ.
1974	Elected member of Sigma Xi, University of Wisconsin
1978	American Men and Women of Science
1992	University of Helsinki Medal
1995	Animal Behavior Society Wm. C. Brown Animal Behavior Teaching Award
1995	Fellow of the Animal Behavior Society (elected)
1996	Teaching Incentive Program (TIP) Award, College of Liberal Arts and Sciences, Univ. Florida
2000	Animal Behavior Society, Distinguished Service Award
2000	STEP Award, University of Florida
2003	Distinguished Visiting Professor, University of Miami
2003	Sigma Xi Senior Research Award, University of Florida Chapter
2005	Doctoral Dissertation Advisor/Mentoring Award from UF Graduate School
2008	Fellow of AAAS (elected)
2011	Myrle E. and Verle D. Nietzel Visiting Distinguished Faculty Program Award, University of Kentucky

GRANTS

1979-81	Harry Frank Guggenheim Foundation Grant
1980-83	National Science Foundation (DEB 80-09334)
1985-86	National Science Foundation (RIT 85-03659)
1988-89	National Science Foundation (BNS 88-15345) (Int. Travel Grant to IEC Conference)
1990-94	National Science Foundation (OCE 90-06392) Division of Sponsored Research, University of Florida
1977, 1979, 1980	Seed Money Grants; Biomedical Research Grant, Faculty Research Award
1980-81, 1982-83, 1989-90, 1996	Graduate Research Assistantship Program
1983-84, 1990	Research Development Award
2000	CLAS Travel Award to attend International Ethological Conference
2002-2003	AAAS – WISC funded by the National Science Foundation
2003-2006	EPA Star Fellowship to my graduate student C.W. Gunnels
2006-2007	NSF Doctoral Dissertation Improvement Grant to my graduate student Hope Klug
2008-2012	PADI Foundation grant to my graduate student Daniel Sasson
2009-2011	NSF Doctoral Dissertation Improvement Grant to my graduate student Clare Ritschoff
2007-2011	National Science Foundation (IOB 06-41750)

EDITORSHIPS AND EDITORIAL BOARDS

1987-90	Associate Editor, <u>Evolution</u>
1979-80; 1988-1991	Consulting Editor, <u>Animal Behaviour</u> ; Editorial Board, <u>Animal Behaviour</u>
1991-2001	Editor, <u>Ethology</u>
2002-2005, 2013-2015	Editor, <u>Advances in the Study of Behavior</u>
2005-2013	Editor-in-Chief, <u>Advances in the Study of Behavior</u>

INVITED LECTURES AT NATIONAL AND INTERNATIONAL MEETINGS AND WORKSHOPS

1978	Conference on Evolution and the Theory of Games, University of Bielefeld, Germany, Lecture
1979	XVI International Ethological Congress, Vancouver, B.C., Lecture
1981	XVII International Ethological Congress, Oxford, England, Symposium Lecture Nordic Council lecture series on Arthropod Behavioral Ecology, University of Uppsala, Uppsala, Sweden
1982	IX International Congress of the International Union for the Study of Social Insects, Boulder, Colorado NATO Workshop on Evolutionarily Stable Strategies, Queen's University, Kingston, Ontario, Lecture
1983	XVIII International Ethological Conference, Brisbane, Australia, Symposium Lecture Nordic Council lecture series on the Evolution of Behavior, Department of Entomology, University of Uppsala,
1985	XIX International Ethological Congress, Toulouse, France, Plenary Lecture
1987	XX International Ethological Conference, Madison, WI, Lecture
1989	XXI International Ethological Conference Utrecht, The Netherlands, Symposium Lecture
1990	XI Int. Congress of the Int. Union for the Study of Social Insects, Bangalore, India, Symposium Lecture
1991	Visiting Women Scholar's Program, Queen's University, Kingston, Ontario, Lecture XII International Ethological Conference, Kyoto Japan, Lecture. Behavior of Marine Animals Symposium, Okinawa, Japan, Lecture.
1992	Nordic Council lecture series on Reproductive Behavior, Dept. Zoology, Helsinki, Finland. IV International Behavioral Ecology Society, Princeton, NJ. Lecture.
1993	Frontiers of Science, Department of Physics, University of Florida, Public Lecture
1994	The Walton Lecture, University of Virginia Biological Station, Mt. Lake, VA V International Behavioral Ecology Society, Nottingham, England, Invited Lecture
1995	XIV International Ethological Conference, Honolulu, Hawaii, Invited Lecture
1997	XV International Ethological Conference, Vienna, Austria, Invited Lecture
1998	Fellows Lecture, Animal Behavior Society Annual Meeting, Carbondale, IL (Plenary Lecture)
1998	Assoc. for the Study of Animal Behavior & Soc. Italian Ethology, Urbino, Italy (Plenary Lecture)
1999	J.T. Emlen Endowed Lectureship, April 1999. University of Wisconsin, Madison, WI
1999	International Ethological Conference, Bangalore, India (Plenary Lecture)
2001	International Ethological Conference, Tübingen, Germany (Symposium Lecture)
2001	XIX Congress of Brazilian Ethology, Juiz de Fora, Brazil (Plenary Lecture)
2003	International Ethological Conference, Florianopolis, Brazil (Symposium Lecture)
2004	European Conference on Behavioral Biology, Groningen, The Netherlands (Symposium Lecture)
2005	International Ethological Conference, Budapest, Hungary (Symposium Co-Organizer)

- 2005 Biological Bases of Behavior, Tlaxcala, Mexico (Lecture at international course)
- 2005 Estuarine Research Federation, Norfolk, VA (Symposium Lecture)
- 2007 International Symposium on the Science and Conservation of Horseshoe Crabs, Oakdale, NY (Symp. Lecture)
- 2007 International Society of Invertebrate Reproduction, Panama City, Panama (Symposium Lecture)
- 2012 Animal Behavior Society Annual Meeting, Albuquerque, NM (Symposium Lecture)
- 2013 International Ethological Conference and Association for the Study of Animal Behavior, Newcastle, UK (symp lec)
- 2013 Coastal and Estuarine Research Federation (CERF), San Diego, CA (Symposium Lecture)
- 2014 8th International Crustacean Congress, Frankfurt, Germany (Symposium Lecture)
- 2015 International Symposium on the Science and Conservation of Horseshoe crabs, Sasebo-City, Nagasaki, Japan
- 2016 Animal Behavior Society Presidential Symposium, Columbia, Missouri (Symposium Lecture)

LECTURES AND POSTERS AT SCIENTIFIC MEETINGS

- 1972, 1975-76, 1979-81, 1983-84, 1987, 1989, 1993-99,
- 2001, 2003, 2004, 2006, 2008, 2009 Animal Behavior Society Annual Meeting
- 1980, 1988 Soc. for the Study of Evolution Annual Meeting
- 2000, 2002, 2008 International Behavioral Ecology Society
- 1982-1996, 2012 Winter Animal Behav. Conf. (Invited)
- 2002 American Fisheries Society Meeting
- 2007 International Ethological Conference, Halifax, Nova Scotia
- 2009, 2010, 2011 UF Marine Biology Meeting, St. Augustine, FL
- 2009 International Ethological Conference, Rennes, France
- 2011 International Ethological Conference, Bloomington, Indiana
- 2014 International Society for Behavioral Ecology Conference, New York
- 2015 International Ethological Conference, Cairns, Australia

INVITED SEMINARS (since 1986)

- | | | |
|------|---|--|
| 1986 | University of Kansas, Lawrence, KS | American Museum of Natural History, New York |
| | University of Toronto, Toronto, NY | Brown University, Providence, RI |
| 1987 | SUNY-Binghamton, Binghamton, NY | University of Florida, Gainesville, FL |
| 1989 | Utah State University, Logan, Utah | Ohio State University, Columbus, OH |
| 1990 | University of Colorado, Boulder, CO | |
| 1991 | Queen's University, Kingston, Ontario | |
| 1992 | University of Helsinki, Helsinki, Finland | University of Jyväskylä, Jyväskylä, Finland. |
| | Florida International University, Boca Raton | Purdue University, Department of Zoology |
| | University of Chicago, Chicago, IL | |
| 1993 | Cornell Univ., Ithaca, NY | Kansas State Univ., Manhattan, KS |
| | Horseshoe Crab Festival, Cape May, NJ (public lecture) | |
| 1994 | U.C. Berkeley, CA | U.C. Davis, CA |
| 1997 | Univ. SW Louisiana, Lafayette, LA | Coastal Carolina College, Conway, SC |
| 1998 | Univ. Florida, Veterinary Medicine | Univ. Florida, Department Zoology |
| 2001 | University of Missouri, St. Louis | |
| 2003 | University of Miami, Department of Biology | Florida Institute of Technology, Melbourne, FL |
| 2004 | University of Maryland | ISPA, Lisbon, Portugal |
| 2005 | UNAM, Tlaxcala, Mexico | |
| 2007 | University of Montana, Missoula, MT | |
| 2010 | Florida State University, Tallahassee, FL | |
| | Institute of Ecology, National University of Mexico (UNAM), Mexico City, Mexico | |
| 2011 | University of Florida, Gainesville, FL | University of Kentucky, Lexington, KY |
| 2014 | Evening Public Lecture Series, Whitney Marine Laboratory for Bioscience | |

PROFESSIONAL SOCIETIES: OFFICES HELD AND CONFERENCES/ SYMPOSIA ORGANIZED

- 1979-1981 Animal Behavior Society, Policy Committee Member
- 1998-2004 Animal Behavior Society, Latin American Affairs Committee Member
- 1982-1988 Animal Behavior Society, Treasurer (elected 2 terms)
- 1982-1988 American Soc. of Zoologists, Animal Behavior Section, Treasurer
- 1989-1991 Animal Behavior Society, Second President-Elect (elected); First President-Elect
- 1991-1992, 1992-1993 Animal Behavior Society, President; Animal Behavior Society, Past-President
- 1988-1989 Co-organizer Winter Animal Behavior Conference

1984-1991	International Council of Ethologists (elected U.S. representative)
1985-1990	U.S International Council of Ethologists Committee, Secretary
1995-1998	Delegate to write Evolutionary Biology White Paper (Evolution, Science and Society)
1998-2003	American Institute of Biological Sciences, Secretary/Treasurer (elected twice)
1998-2002	Councilor, International Society of Behavioral Ecology (elected)
1995-1999	International Ethological Conference, Vice-Secretary General
1999-2003	International Ethological Conference, Secretary General
2003-2007	International Ethological Conference, Past Secretary General; Corresponding Secretary
2005-2007	International Symposium on the Science and Conservation of Horseshoe Crabs (organizing committee)
2009	Animal Behavior Society symposium co-organizer and moderator
2009	International Ethological Conference symposium co-organizer and moderator
2012-present	Retired Faculty, University of Florida, Treasurer (elected 3X)
2013-2016	Commission Member IUCN SSC, Horseshoe crab Specialist Group

MAJOR PUBLIC OUTREACH (Broader Impacts)

1991-1995	Advisory Board, PBS series, "Natural History of the Senses". WETA, Washington, D.C.
2002, '04, '05, '06, '08, 2010-2015	Green Eggs and Sand (workshop on Horseshoe crabs for middle-school teachers). Delaware, New Jersey and Maryland Divisions of Fish and Wildlife, Delaware Science Institute
2005, '06, '07, '08, '10, '11, '12, '13, '14, '15	Green Eggs and Sand workshop (3-day workshop for FL and GA middle school and high school teachers), Marine Institute, Savannah, GA
2008	Green Eggs and Sand workshop (3-day workshop for NY middle and high school teachers), Cornell University Extension Marine Camp, Peconic, NY
2006	Georgia Outdoors, Georgia Public Radio, "Georgia's Beaches" (major segment on horseshoe crabs)
2009-2011	Green Eggs and Sand curriculum revision team (in collaboration with teachers and State of MD, DE and NJ science educators)
2012	Green Eggs and Sand workshop (3-day workshop for MA teachers), Mass. Aud. Society, Wellfleet, MA
2012-2013	Board of Directors for ERDG; database entered in horseshoecrab.org
2013	Green Eggs & Sand Workshop, Boothbay Harbor, Maine (3-day workshop)
2013	Public Lecture at Cedar Key Library, Kathleen Tuck Memorial installation
2013	Public Lecture, Whitney Marine Lab, St. Augustine, FL
2013	Public Lecture, Marine Discovery Center, New Smyrna Beach, FL
2014	Green Eggs & Sand Workshop, Milford, Connecticut (3-day workshop)
2014	Institute of Learning in Retirement, Gainesville, FL, Lecture on horseshoe crab management
2015	Public Lecture, St. Petersburg College, St. Petersburg, FL

GRANT REVIEW PANELS AND EVALUATION COMMITTEES (since 1986)

1987, 1990, 1992	National Science Foundation N.A.T.O. Post-Doctoral Fellowships Panel
1991	National Research Council, Nat. Acad. of Sci. NSF Graduate Research Fellowships
1988	National Institutes of Mental Health Review Panel, Basic Behavioral Processes
1987-1992	Smithsonian Tropical Research Institute, Professional Evaluation and Review Committee
1988	Swedish National Research Council Review Panel, Invertebrate Zoology
1988	University of Chicago, Department of Evolution and Ecology, External Review Committee
1992	Nebraska EPSCoR Committee
1994	Swedish National Research Council Expert Committee, Evolutionary Ecology
1995-1999	Princeton University, Department of Ecology and Evolutionary Biology; Advisory Committee
1998	University of Virginia, Department of Biology, Program Review
1998	National Science Foundation Panel Member, IGERT
1998	National Science Foundation, Committee of Visitors, Animal Behavior Panel
1998	Atlantic States Marine Fisheries Comm., Horseshoe Crab Management Plan, Peer Review Panel
2000	National Science Foundation, NEON Panel, Archbold Biological Station
2000, 2003	National Science Foundation, Animal Behavior Panel
2001	Oregon State University, Department of Zoology, External Review Committee
2003	Atlantic States Marine Fisheries Comm., Shorebird Management Plan, Peer Review Panel, Stone Harbor, NJ
2005	North Carolina State University, Department of Zoology, External Review Committee
2003-08	External Advisory Board, Montana PACE (NSF ADVANCE award)
2008	Purdue University, Department of Biology, External Review Committee
2009	Animal Behavior Society Student Grants Committee

2011	University of Oklahoma, Department of Zoology, External Program Review
2012	Simon Fraser University, Vancouver, B.C., External Examiner
2013	University of Western Australia, Perth, W.A., External Examiner
2014	Baker Fund Grant review, Ohio University, Miami, OH

MANUSCRIPT and GRANT REVIEWS

2012: PLOS One, PNAS, Animal Behaviour, Behavioral Ecology (2), Journal of Marine Biology, NSF
 2013: PNAS, Animal Behaviour (4), Behavioral Ecology (2), Proc. Roy Soc. B, Biology Letters, PLOS One, Biol. Bull., NSF (2), Journal of Animal Ecol.,
 2014: Animal Behaviour (2), Marine Biology, Behavioral Processes, Behavioral Ecology and Sociobiology, Proceedings of the National Academy of Sciences, Journal of Animal Ecology, Biological Bulletin, Behavioral Ecology, NSF (2)
 2015: Estuaries and Coasts, Horseshoe Crab Conservation book (3), Animal Behaviour, NSF(2), Aquatic Biology, New Jersey Sea Grant.

TENURE AND PROMOTION REVIEWS

2014: UT Chattanooga, University of Manitoba, University of Georgia, University of Florida

MAJOR SERVICE TO COLLEGE OF LIBERAL ARTS AND SCIENCES and UNIVERSITY (since 2000)

2000-'03; 2006-11	University Senate; Faculty Senate (elected)
2007-2010	Senate Infrastructure Council (elected)
2008-2010	Chair, Senate Infrastructure Council and member of the Senate Steering Committee
2003-8	University of Florida Marine Laboratory at Seahorse Key Task Force Chair; SHK Advisory
1999-2001	Women's Studies and Gender Research Executive Board
2000-2002; 2004-2007	Facilities Planning and Land Use Committee
2000	Psychology Department Chair Search Committee
2000	University of Florida Presidential Search Committee (SAC)
2001	Associate Dean Search Committee, CLAS
2002	Town / Gown Task Force on Neighborhoods (Co-chair) University Senate Committee
2004-2005	UF Master Plan Steering Committee
2005-2008	Graduate Council
2006-2009	CLAS Finance Committee (elected)
2008-2010	Chair, Faculty Senate Infrastructure Council Member, ITAC-AT Committee
2008-2010	Member, Faculty Senate Steering Committee
2006-2011	Chair, United Faculty of Florida Grievance Team

COURSES TAUGHT

Introductory Zoology Winter 1977; Ecology Seminar (graduate) Winter 1977
 Animal Behavior Spring 1977-present (each spring; 4 credit course with laboratory)
 Evolution Fall 1979-81, 1987, 1993, 1994
 Princeton University, Visiting Research Biologist: Animal Behavior Seminar (graduate) Fall 1985; Tropical Biology (Costa Rica field trip) Spring 1986
 Behavioral Ecology: Fall 1995, 1999
 Animal Behavior Seminar (graduate) 1977, 1979-81, 1983, 1989, 1991, 1995, 1997-2002, 2006, 2009, 2010, 2011
 Ethology (graduate; 4 credit course with laboratory): Fall 1982-1996; 2002, 2005
 Veterinary Ethology: Spring 1997, 1998
 Integrative Principles Graduate Course: Fall 2006, 2007, 2008 (one 4-week module)
 Biological Perspectives on Contemporary Social Issues (honors introductory level): Fall 2006.
 Theory and Practice in Biology: Fall 2007, 2008, 2010
 Animal Behavior Seminar (graduate) with St. Mary: spring 2012, 2013, 2015

POST-DOCTORAL SCIENTISTS SUPERVISED

Sheri Johnson (PhD 2007 from University of Maine; Post-doc UF 2007-2010). 2015-present, Assistant Professor, Department of Zoology, University of Otago, Dunedin, New Zealand
 Mary Hart (PhD 2011 from University of Kentucky). 2014-present, adjunct assistant professor, Dept. Biology, University of Florida.

GRADUATE STUDENTS SUPERVISED

- Jeff Lucas (PhD 1983). Dissertation: Feeding behavior and life history strategies of antlions. NATO post-doctoral fellow, Oxford, England, 1983-1984. Assistant Professor, College of William and Mary, 1984-1986 (temporary). Univ. of California at Redlands, Assistant Professor, 1986-1987. Purdue University, Assistant Professor 1987-1994, Associate Professor 1994-2001. Professor 2001-present.
- Glenn Goodfriend (PhD 1983). Dissertation: Feeding behavior and the evolution of clinal variation in Jamaican land snails. Weizmann Institution of Science Post-doctoral Fellow, Rehovot, Israel, 1983-1994. Research Scientist, Smithsonian Institution, Washington, D.C. 1994-1995. Research Scientist, Geophysical Lab. Carnegie Institution of Washington, Washington, D.C. 1995-2002. Deceased 10/02
- Steven Frank (MS 1983). Thesis: Sex ratios and reproductive behavior of Florida fig wasps. Univ. of Michigan Ph.D. 1987, Univ. of California-Irvine, Assistant Professor 1987-1993; Associate Professor 1994-1998; Professor 1998-present.
- Martin Obin (MS 1983). Thesis: Territorial and marking behavior of a brood parasitic mud-daubing wasp. Assistant Professor, Tufts University Medical School, 1996-present.
- Linda Fink (MS 1984, PhD 1989). Thesis: Maternal investment in the green lynx spider. Dissertation: Color polymorphism in sphingid caterpillars. Middlebury College. Assistant Professor, 1989-90. Sweet Briar College, Virginia, Assistant Professor, 1990-1995; Associate Professor 1995-2001; Professor and Chair 2000-2010. Duberg Professor of Biology 2010-present.
- Giselle Mora-Bourgeois (MS 1987, PhD 1991). Thesis: Mating and nesting behavior of a tropical harvestman with paternal care. Dissertation: Site-based mating system in a tropical harvestman. Assistant Professor, University of Costa Rica, San Jose, 1992-1998; Associate Professor 1998-2002; National Park Service Center for Urban Ecology, Science Education Coordinator, Washington, D.C.
- Karen Masters (MS 1989). Thesis: The adaptive significance of female-biased sex ratios in the neotropical treehopper *Umbonia ataliba*. Princeton University, Ph.D. 2000. Conducting research for Centro Científico Tropical (CCT), Monteverde, Costa Rica on the interactions between plants and insects.
- Sharoni Shafir (MS 1991). Thesis: Honeybees foraging on artificial flowers - intransitivity of preferences and energetics. Stanford University Ph.D. 1994. Post-doctoral Fellowship, University of Ohio, Columbus, OH. 1995-1998; Lecturer 1998-2004, Associate Professor 2004-2010, Professor 2010-present, Department of Entomology, Hebrew University of Jerusalem and Director of the Triwaks Bee Research Center.
- Richard Buchholz (MS 1989; Ph.D. 1994). MS Thesis: Singing behavior and ornamentation in the yellow-knobbed curassow (*Crax daubentoni*). Ph.D. Dissertation: Adaptive Functions of Fleshy Ornamentation in Wild Turkeys and Related Birds. University of Florida, Visiting Assistant Professor, 1994. University of Northeastern Louisiana, Monroe, LA Assistant Professor (tenure-track) 1995-1999; University of Mississippi, Oxford, MS. Assistant Professor (tenure-track) 1999-2003; Associate Professor 2003-present.
- Bonnie Ploger (PhD 1992) Dissertation: Proximate and ultimate causes of brood reduction in brown pelicans (*Pelecanus occidentalis*). 1993-94, Visiting Assistant Professor, Grinnell College, Grinnell, Iowa; N.A.T.O post-doctoral fellowship, Queen's University Kingston, Ontario 1994-95. Hamline College, St. Paul, MN Assistant Professor, 1995-2001; Associate Professor 2001-2009; Professor 2009-present
- Dustin Penn (MS 1992) Thesis: Nesting behavior of horseshoe crabs. University of Utah, Ph.D. 1993. Univ. Utah Post-doctoral Fellowship, 1997-2002. Director, Konrad Lorenz Institute of Ethology, University of Veterinary Medicine, Vienna, Austria. 2002-present.
- Laurie Eberhardt (PhD 1994). Dissertation: Sap Feeding and its Consequences for Reproductive Success and Communication in Yellow-bellied Sapsuckers. Assistant Professor, Valparaiso University, Valparaiso, IN 1994-present (tenure-track); Associate Professor 2001-present.
- Ron Clouse (MS 1994). Thesis: Nesting Decisions of the Social Paper Wasp *Myschocyttarus mexicanus*. Agriculture Department Chair, PATS, Pohnpei, FM. 1994-1995. Archbold Biological Station, Res. Sci. 1996. Res. Sci., Museum of the Everglades 1996-97. Economic Research, NYC (1998-2004). Ph.D., Harvard University 2004-2010. Post-doctoral research associate, American Museum, NY (2010-2013); post-doctoral fellow, Dept. Bioinformatics and Genomics, University of North Carolina at Charlotte, Charlotte, NC
- Jose-Luis Osorno (PhD 1996) Dissertation: Male mate desertion in the magnificent frigate-bird. Research Associate, Instituto de Ecologia, Universidad Nacional Autonoma Mexico, 1996-2004. Deceased October 2004.
- Susan Chien (MS) 1994-2000. Paternity in the Pipe-organ Mud-daubing wasp. (did not complete thesis).
- Cynthia Filgate (Hassler) (MS 1999) Thesis: Satellite male groups in horseshoe crabs (*Limulus polyphemus*): how and why are males choosing females? Computer firm in Austin, TX, 1999-2006. Senior Database Developer, QuickArrow, Inc., Austin, TX (2006-present).
- Kavita Isvaran (PhD 2003) Dissertation: Mate choice in blackbuck. Gardiner Post-doctoral Fellowship from Cambridge University, UK. (Post-doc with T. Clutton-Brock, Department of Zoology) (2003-2007). Tenured Assistant Professor, Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560012, India (2007-present).

- Suhel Quader (PhD 2003) Dissertation: Mate choice in the baya weaverbird. Marie Curie European Union Post-doctoral Fellowship., Cambridge, UK (Post-doc in Department of Zoology, Cambridge University with N. Davies) 2003-2005; British Society for the Protection of Birds 2005-06. Scientist, National Centre for Biological Sciences, Bangalore, India. (2006-present)
- Manuel Vélez (M.S 1999; Ph.D 2004) Thesis: Parental care strategies in the Central American cichlid *Aequidens coeruleopunctatus*: tradeoffs between present and future reproduction. Dissertation: Temporal variation in natural and sexual selection of calling behavior in the field cricket, *Gryllus rubens*. Boston University Law School (2003-2006). Law clerk for federal district court judge in the District of Puerto Rico (2006-2007); Intellectual property Associate Lawyer with Mayer Brown law firm, NY (2008-present).
- Laura Sirot (MS 1999; PhD 2004) Thesis: Intersexual conflict and mating avoidance in the damselfly, *Ischnura ramburi*. PhD research: Sperm competition and mate conflict in *Diaprepes abbreviatus*, a weevil pest of citrus. NIH NRSA Post-doctoral Fellowship with Mariana Wolfner, Cornell University (2004-2010). Tenure-track Assistant Professor, College of Wooster, Wooster, OH (2010-present).
- Billy Gunnels (Co-advisor with St. Mary) (PhD 2006) 2000-2006. Alternative strategies and nesting decisions in *Myschocyttarus mexicanus*, a primitively eusocial wasp. Teaching Post-doc, University of Florida (2006-2007); Assistant Professor, (2007-2014). Associate Professor, Florida Gulf Coast University, Dept. Biological Sciences (2014-present).
- Dimitri Blondel (Co-advisor with Phelps) (MS 2006) Social behavior of Costa Rican singing mice. Ph.D. program UF (2006-2012); post-doctoral fellow, Department of Biology, Duke University (2012-2014)
- Rachel Schwab (Co-advisor with St. Mary) (MS 2006) Thesis: Mating group formation in the horseshoe crab (*Limulus polyphemus*): are satellite males ideal-free distributed among females of variable fecundity and how do they assess fecundity? Naturalist, Amelia Island Plantation (2006-2007); graduate student College of Education, UF (2007-2009); teaching school in Jupiter, FL (2009-present).
- Hope Klug (PhD 2007) 2006-2007. Filial cannibalism in gobies and flagfish. NSF International Post-doctoral Fellowship, University of Helsinki with Hanna Kokko (2008-2010). NSF post-doctoral fellowship with Dr. Suzanne Alonzo, Yale University (2010-2011); Tenure-track assistant professor, University of Tennessee at Chattanooga (2011-present).
- Katharine Saunders (M.S. 2010) 2008-2010. Chemical cues are used by male horseshoe crabs, *Limulus polyphemus*, to locate and select mates. Field assistant, Farallon Islands 2011-2012; Copy editor, PLoSOne 2012-2013; Wildlife Technician, Bird Research Northwest, Burns, OR. (2013)
- Clare Rittschof (PhD 2011). Environmental heterogeneity and phenotypic variation: the evolution of male body size in a golden orb-web spider. NSF Post-doctoral fellow, Department of Entomology and Carl R. Woese Institute for Genomic Biology, Dr. Gene Robinson, University of Illinois (2011-2014). Post-doctoral Associate, Department of Entomology, Pennsylvania State University, State College, PA (2014-2015). Tenure-track Assistant Professor, Department of Entomology, University of Kentucky, Lexington, KY (2016-present).
- Matthew D. Smith (PhD 2012). Evolution of body size and life-history patterns in horseshoe crabs. 2012-2013 Adjunct Lecturer, Dept of Biology, University of Florida, HHMI post-doctoral fellow with Dr. Martin Cohn, College of Medicine, UF
- Daniel Sasson (PhD 2015). Evolution of sperm traits within and between populations. Post-doctoral Fellowship with Dr. Joe Ryan at the Whitney Laboratory for Marine Bioscience, St. Augustine, Florida.

Member of Committee (since 2007)

-Biology-

Charlotte Skov (PhD 2007)
 Wendy Schelsky (PhD 2010)
 Ondi Crino (MS 2008)
 Samantha Hilber (PhD 2013)
 Dimitri Blondel (PhD 2012)
 Gustavo Londono (PhD 2013)
 Alex Jahn (PhD 2013)
 Ariel Zimmerman (MS 2010)
 Scarlett Tudor (PhD)
 Christina Vasquez (PhD 2014)
 Joe Pfaller (PhD)
 Patrick Norby (MS)

Other than biology -

Frank Bouchard (Ph.D. 2010, Genetics)
 Evan Adams (MS 2007, Wildlife)
 Julie Marischal (PhD 2009, Psychology)
 Katherine Saulsgiver (PhD 2009, Psychology)

Erin McClure (PhD 2009, Psychology)
 Mary Beth Manjerovic (PhD 2010, Biology Univ Central Florida)
 Ashley King (MS 2009, Biology, University of Montana)
 Rachele Yankelevitz (PhD 2009, Psychology)
 Edward Atkinson (PhD 2011, Entomology)
 Monique Udell (PhD 2011, Psychology)
 Frank Bouchard (PhD 2012, Genetics)
 Natalie Williams (MS 2012, Wildlife)
 Erik Blosser (PhD 2014, UF Entomology in Vero Beach)
 Wendy Helmey-Hartman (PhD 2014, Entomology)
 Erica Feuerbacher (MS 2011, PhD 2014, Psychology)
 Mary Hart (Outside examiner, Ph.D. Bio. 2011, Univ.KY)
 Lindsay Mehrkam (MS 2013, Ph.D. 2015, Psychology)
 Alexandra Protopopova (MS 2012, Ph.D. 2015, Psychology)
 María Cristina Carrasquilla (PhD 2014, Entomol. in Vero Beach)
 Nathaniel J. Hall (PhD 2015, Psychology)
 Vanessa Simões Dias (PhD, Entomology)

EDITED BOOKS

- 2003 Shuster, C.S., R. B. Barlow and H. J. Brockmann. (eds.) The American Horseshoe Crab. Harvard University Press. Cambridge, MA. 427 pp.
- 2008 Oliveira, R., M. Taborsky and H.J. Brockmann (eds.) Alternative Reproductive Tactics – An Integrative Approach. Cambridge University Press. 507 pp.

PUBLICATIONS (peer reviewed journals or book chapters) *graduate students under my direction; ‡ post-doctoral students

- 1973 Brockmann, H. J. The function of poster-coloration in the beaugregory, *Eupomacentrus leucostictus* (Pisces: Pomacentridae). Zeitschrift für Tierpsychologie, 33: 13-34.
- 1975 Bayer, L. J. and H. J. Brockmann. Curculionidae and Chrysomelidae found in aquatic habitats in Wisconsin. Great Lakes Entomologist, 8: 219-226.
- 1976 Brockmann, H. J. and J. P. Hailman. Fish cleaning symbiosis: Notes on juvenile angelfishes (*Pomacanthus*, Chaetodontidae) and comparisons with other species. Zeitschrift für Tierpsychologie, 42: 129-138.
- 1978 Terborgh, J., J. Faaborg and H. J. Brockmann. Island colonization by lesser Antillean birds. Auk, 95: 59-72.
- 1979 Brockmann, H. J. and C. J. Barnard. Kleptoparasitism in birds. Animal Behaviour, 27: 487-514.
- 1979 Brockmann, H. J. Nest-site selection in the great golden digger wasp, *Sphex ichneumoneus* L. (Sphecidae). Ecological Entomology, 4: 211-224.
- 1979 Brockmann, H. J., A. Grafen and R. Dawkins. Evolutionarily stable nesting strategy in a digger wasp. Journal of Theoretical Biology, 77: 473-496.
- 1979 Brockmann, H. J. and R. Dawkins. Joint nesting in a digger wasp as an evolutionarily stable preadaptation to social life. Behaviour, 71: 203-245.
- 1980 Brockmann, H. J. The control of nest depth in a digger wasp (*Sphex ichneumoneus* L.). Animal Behaviour, 28: 426-445.
- 1980 Brockmann, H. J. Diversity in the nesting behavior of mud-daubers (*Trypoxylon politum* Say; Sphecidae). Florida Entomologist, 63: 53-64.
- 1980 Dawkins, R. and H. J. Brockmann. Do digger wasps commit the Concorde fallacy? Animal Behaviour, 28: 892-896.
- 1980 Brockmann, H. J. House sparrows kleptoparasitize digger wasps. Wilson Bulletin, 92: 394-398.
- 1981 Lucas*, J. and H. J. Brockmann. Predatory interactions between ants and antlions. Journal Kansas Entomological Society, 54: 228-232.
- 1983 Brockmann, H. J. Animal behavior. In L. Johnson (ed.) Biology. W. C. Brown Co. Publ., pp. 826-859.
- 1983 Cohen*, J. A. and H. J. Brockmann. Breeding activity and mate selection in the horseshoe crab, *Limulus polyphemus*. Bulletin Marine Science, 33: 274-281.
- 1984 Brockmann, H. J. The evolution of insect sociality. In J. Krebs and N. Davies (eds.) Behavioral Ecology. Sinauer Associates, Second Edition, pp. 340-361.
- 1985 Brockmann, H. J. Tool using in wasps. Psyche 92:309-329.
- 1985 Brockmann, H. J. Provisioning behavior of the great golden digger wasp. Journal Kansas Entomological Society, 58:631-655.
- 1986 Brockmann, H. J. Decision making in a variable environment: lessons from insects. In L. Drickamer (ed.) Behavior and the Dynamics of Populations. Privat Publ., Toulouse, France, pp. 95-111.
- 1987 Seger, J. and H. J. Brockmann. What is bet-hedging? In P. Harvey and L. Partridge (eds.) Oxford Surveys in Evolutionary Biology. Oxford Univ. Press, 4:182-211.
- 1988 Brockmann, H. J. Father of the brood (Conflict and cooperation in a mud-daubing wasp). Natural History Magazine, 97(7):32-37.
- 1989 Brockmann, H. J. and A. Grafen. Mate conflict and male behavior in a solitary wasp, *Trypoxylon politum*. Animal Behaviour 37:232-255.
- 1990 Brockmann, H. J. Mating behavior of horseshoe crabs, *Limulus polyphemus*. Behaviour 114:206-220.
- 1992 Brockmann, H. J. and A. Grafen. Sex ratios and life-history patterns of a solitary wasp. Behavioral Ecology and Sociobiology 30:7-27.
- 1992 Brockmann, H. J. Male behavior, courtship and nesting of the solitary wasp, *Trypoxylon monteverdeae*. Journal of the Kansas Entomological Society 65(1):66-84.
- 1992 Brockmann, H.J. and D. Penn*. Male mating tactics in horseshoe crabs, *Limulus polyphemus*. Animal Behaviour 44:653-665.
- 1993 Brockmann, H. J. Parasitizing conspecifics: comparison between Hymenoptera and birds. Trends Ecol. Evol. 8:2-3.
- 1994 Brockmann, H.J., T. Coleson and W. Potts. Sperm competition in horseshoe crabs (*Limulus polyphemus*). Behavioral Ecology and Sociobiology 35: 153-160.
- 1994 Penn*, D. and H. J. Brockmann. Nest-site selection in the horseshoe crab, *Limulus polyphemus*. Biological Bulletin 187: 373-384.
- 1995 Penn*, D. and H. J. Brockmann. Age-biased stranding and righting in horseshoe crabs (*Limulus polyphemus*). Animal Behaviour, 49: 1531-1539.

- 1996 Brockmann, H. J. Satellite male groups in horseshoe crabs. *Limulus polyphemus*. Ethology 102: 1-21.
- 1996 Arnold, S. and H. J. Brockmann. Evolution of behavior. Approaches to studying behavioral change IN Foundations of Ethology, L. D. Houck and L. C. Drickamer (eds.). University of Chicago Press. pp. 673-682.
- 1996 Dyer, F. C. and H. J. Brockmann. Sensory processes, orientation and communication: Biology of the *Umwelt*. IN Foundations of Ethology, L. D. Houck and L. C. Drickamer (eds.). University of Chicago Press. pp. 529-538.
- 1997 Brockmann, H. J. Cooperative Breeding in Wasps and Vertebrates: the Role of Ecological Constraints. IN Evolution of Social Behaviour in Insects and Arachnids, J. Choe and B. Crespi (eds.). Cornell University Press. pp. 348-371.
- 1997 Brockmann, H.J. Xiphosurida. McGraw-Hill Yearbook of Science and Technology 1997. McGraw Hill, NY. pp. 491-493.
- 1999 Harari†, A. R. and H. J. Brockmann. Male beetles attracted by females mounting. Nature 401:763.
- 2000 Harari†, A. and H.J. Brockmann and P.J. Landolt. Intrasexual mounting in the beetle *Diaprepes abbreviatus*. Proceedings of the Royal Society of London B 267: 2071-2079.
- 2000 Brockmann, H.J., C. Nguyen and W. Potts. Paternity in horseshoe crabs when spawning in multiple male groups. Animal Behaviour 60:837-849.
- 2001 Sirot*, L. and H.J. Brockmann. Costs of sexual interactions to females in Rambur's forktail damselfly, *Ischnura ramburi* (Zygoptera: Coenagrionidae). Animal Behaviour 61:415-424.
- 2001 Brockmann, H.J. The evolution of alternative strategies and tactics. Advances in the Study of Behavior 30:1-51.
- 2001 Hassler*, C. and H.J. Brockmann, H.J. Evidence for use of chemical cues by male horseshoe crabs when locating nesting females (*Limulus polyphemus*). Journal of Chemical Ecology 27: 2319-2335.
- 2002 Brockmann, H.J. An experimental approach to altering mating tactics in male horseshoe crabs (*Limulus polyphemus*). Behavioral Ecology 13:232-238.
- 2003 Harari†, A.R., P.J. Landolt, C.W. O'Brien, H.J. Brockmann. Prolonged guarding behavior and sperm competition in the weevil *Diaprepes abbreviatus* (L.) (Coleoptera: Curculionidae). Behavioral Ecology 14: 89-96.
- 2003 Sirot*, L.K. and H.J. Brockmann, C. Marinis and G. Muschett. Maintenance of a female-limited polymorphism in *Ischnura ramburi* (Zygoptera: Coenagrionidae): evaluation of hypotheses and new insights. Animal Behaviour 66:763-775.
- 2003 Brockmann, H.J. Nesting behavior: a shoreline phenomenon. IN The American Horseshoe Crab. Ed. By C.S. Shuster, R.B. Barlow and H. J. Brockmann. Harvard University Press, Cambridge, MA. Pp. 33-49.
- 2003 Brockmann, H.J. Male competition and satellite behavior. IN The American Horseshoe Crab. Ed. By C.S. Shuster, R.B. Barlow and H. J. Brockmann. Harvard University Press, Cambridge, MA. Pp. 50-82.
- 2004 Brockmann, H.J. Variable Life-History Patterns in the Pipe-Organ Mud-daubing Wasp, *Trypoxylon politum* (Hymenoptera: Sphecidae). Journal of the Kansas Entomological Society (invited memorial volume for Howard E. Evans) 77: 503-527.
- 2005 King, T.L., M.S. Eackles, A.P. Spidle and H.J. Brockmann. Regional differentiation and sex-biased dispersal among populations of horseshoe crabs (*Limulus polyphemus*). Transactions of the American Fisheries Society 134:441-465.
- 2006 Duffy, E.E., D. Penn*, M.L. Botton, H. J. Brockmann and R.E. Loveland. Eye and clasper damage influence male mating tactics in the horseshoe crab, *Limulus polyphemus*. Journal of Ethology 24: 67-74.
- 2006 Vélez*, M. and H.J. Brockmann. Seasonal variation in selection on male calling song in the field Cricket, *Gryllus rubens*. Animal Behaviour 72:439-448.
- 2006 Veléz*, M. and H.J. Brockmann. Seasonal variation in female response to male calling song of the field cricket *Gryllus rubens*. Ethology, 112:1041-1049.
- 2007 Sirot*, L.K., H.J. Brockmann and S.L. Lapointe. 2007. Male postcopulatory reproductive success in the beetle, *Diaprepes abbreviatus*. Animal Behaviour 74:143-152.
- 2007 Schwab*, R., H.J. Brockmann. The role of visual and chemical cues in the mating decisions of satellite male horseshoe crabs (*Limulus polyphemus*). Animal Behaviour 74:837-846.
- 2008 Brockmann, H.J. Alternative reproductive tactics in insects. IN: Alternative Reproductive Tactics – An Integrative Approach. R.F. Oliveira, M. Taborsky and H.J. Brockmann (eds.). Cambridge University Press. Pp. 177-223.
- 2008 Brockmann, H.J. and M. Taborsky. Alternative reproductive tactics and the evolution of alternative allocation phenotypes. IN: Alternative Reproductive Tactics – An Integrative Approach. R.F. Oliveira, M. Taborsky and H.J. Brockmann (eds.). Cambridge University Press. Pp. 25-51.
- 2008 Taborsky, M., R. F. Oliveira and H. J. Brockmann. The evolution of alternative mating tactics: concepts and questions. IN: Alternative Reproductive Tactics – An Integrative Approach. R.F. Oliveira, M. Taborsky and H.J. Brockmann (eds.). Cambridge University Press. Pp. 1-21.
- 2008 Brockmann, H.J., R.F. Oliveira and M. Taborsky. Integrating mechanisms and function: prospects for future research. IN: Alternative Reproductive Tactics – An Integrative Approach. R.F. Oliveira, M. Taborsky and H.J. Brockmann (eds.). Cambridge University Press. Pp. 471-489.
- 2009 Brockmann, H.J. and M.D. Smith*. Reproductive competition and sexual selection in horseshoe crabs. IN: Biology and Conservation of Horseshoe Crabs. J. Tanacredi, M. Botton, and D. Smith (eds.). Springer Science. Pp. 199-221.
- 2009 Zaldívar-Rae, J., R.E. Sapién-Silva, M. Rosales-Raya, and H. J. Brockmann. 2009. American horseshoe crabs, *Limulus polyphemus*, in Mexico: open possibilities. IN: Biology and Conservation of Horseshoe Crabs. J. Tanacredi, M. Botton, and D. Smith (eds.). Springer Science. Pp. 97-113.

- 2010 Taborsky, M. and H.J. Brockmann. Alternative reproductive tactics and life history phenotypes. IN: Animal Behaviour: Evolution and Mechanisms. P. Kappeler (ed.). Springer Verlag Publ. pp. 537-586.
- 2010 Pereira, R*, J. Sivinski, P. Teal and H.J. Brockmann. 2010. Enhancing male sexual success in a lekking fly (*Anastrepha suspensa* (Loew; Tephritidae) through a juvenile hormone analog has no effect on adult mortality. Journal of Insect Physiology, 56: 1552-1557.
- 2010 Johnson, S.L. and H.J. Brockmann. Costs of multiple mates: an experimental study in horseshoe crabs Animal Behaviour 80: 773-782. Chosen as featured article of the month Animal Behaviour 80:771.
- 2010 Saunders, K* and H.J. Brockmann, W. Watson and S.J. Jury. Male horseshoe crabs, *Limulus polyphemus*, use multiple sensory cues to locate mates. Current Zoology, 56: 485-498.
- 2011 Brockmann, H.J. and S.L. Johnson. A long-term study of spawning activity in a Florida Gulf coast population of horseshoe crabs (*Limulus polyphemus*). Estuaries and Coasts, 34: 1049-1067. doi: 10.1007/s12237-011-9419-1
- 2012 Johnson, S.L. and H.J. Brockmann. Alternative reproductive tactics in female horseshoe crabs. Behavioral Ecology 23: 999-1008.
- 2012 Sasson, D.A., S.L. Johnson and H.J. Brockmann. The role of age on sperm traits in the American horseshoe crab, *Limulus polyphemus* Animal Behaviour 84: 975-981.
- 2013 Smith, M.D., H.E. Schrank and H.J. Brockmann. 2012. Measuring the costs of alternative reproductive tactics in horseshoe crabs, *Limulus polyphemus*. Animal Behaviour 85: 165-173. 10.1016/j.anbehav.2012.10.021.
- 2013 Johnson, S.L. and H.J. Brockmann. Parental effects on early development: testing for indirect benefits of polyandry. Behavioral Ecology 24: 1218-1228. DOI: 10.1093/beheco/art056
- 2014 Nossa, C., P. Havlak, J-X Yue, K. Vincent, J. Lv, N. Lee, H.J. Brockmann and N. H. Putnam. Joint assembly and genetic mapping of the Atlantic horseshoe crab genome reveals ancient whole genome duplication. accepted GigaScience 3:1-21. doi:10.1186/2047-217X-3-9
- 2014 Smith, M.D. and H.J. Brockmann. The evolution and maintenance of sexual size dimorphism in horseshoe crabs: an evaluation of six functional hypotheses. Animal Behaviour 96:127-139.
- 2014 Vasquez, M.C., S.L. Johnson, H.J. Brockmann and D. Julian. Nest site selection minimizes environmental stressor exposure in the American horseshoe crab, *Limulus polyphemus*. Journal of Experimental Marine Biology and Ecology 463: 105-114. doi: 10.1016/j.jembe.2014.10.028
- 2015 Brockmann, H.J., T. Black and Tim L. King. Florida horseshoe crabs: Populations, genetics and the marine life harvest. IN R.H. Carmichael, Mark L. Botton, P.K.S. Shin and S.G. Cheung, editors. Changing Global Perspectives on Biology, Conservation and Management of Horseshoe Crabs. Springer Scientific (in press)
- 2015 Brockmann, H.J., S.L. Johnson, M.D. Smith and D. Sasson. Mating tactics of the American Horseshoe crab. IN R.H. Carmichael, Mark L. Botton, P.K.S. Shin and S.G. Cheung, editors. Changing Global Perspectives on Biology, Conservation and Management of Horseshoe Crabs. Springer Scientific (in press)
- 2015 King, T., M. Eackles, A.W. Aunins, H.J. Brockmann, E.M. Hallerman and B.B.Brown. Conservation genetics of the horseshoe crab (*Limulus polyphemus*): allelic diversity, zones of genetic discontinuity, and regional differentiation. IN R.H. Carmichael, Mark L. Botton, P.K.S. Shin and S.G. Cheung, editors. Changing Global Perspectives on Biology, Conservation and Management of Horseshoe Crabs. Springer Scientific (in press)
- 2015 Sasson, D., Johnson, S.L. and H.J. Brockmann. Sperm traits in a system with condition-dependent alternative reproductive tactics. Behavioral Ecology and Sociobiology (in press)
- 2015 Vasquez, M.C., A. Murillo, H.J. Brockmann and D. Julian. Multiple stressor interactions influence embryo development rate in the American horseshoe crab, *Limulus polyphemus*. Journal of Experimental Biology. (in press)

SUBMITTED AND IN PREPARATION

- Brockmann, H.J., S.L. Johnson, D.A. Sasson and M.D. Smith. Seasonal variation in horseshoe crab spawning (*Limulus polyphemus*). Being revised
- Sasson, D., Johnson, S.L. and H.J. Brockmann. The role of sexual selection on sperm trait variation across populations of the horseshoe crab, *Limulus polyphemus*. J. Evol. Biol.
- Smith, M.D. and H.J. Brockmann. The interaction between temperature and season length predicts a rare non-linear ecogeographic cline in body size.
- Keegan**, L., M.D.Smith* and H.J. Brockmann. Life-history patterns of juvenile horseshoe crabs from Florida.
- Keegan**, L., S.L. Johnson and H.J. Brockmann. Juvenile behavior
- Ponciano, J.M. and H.J. Brockmann. Spawning survey methods.
- St. Mary, C. and H.J. Brockmann. Model of the horseshoe crab mating system.
- Hart, M.K. and H.J. Brockmann. Mate choice in horseshoe crabs

THESIS AND DISSERTATION

- 1972 The function of poster-coloration in the Beau-Gregory, *Eupomacentrus leucostictus* (Pisces; Pomacentridae). (Jack P. Hailman - adviser)
- 1976 The control of nesting behavior in the great golden digger wasp, *Sphex ichneumoneus* (L.) (Hymenoptera, Sphecidae). Dissertation Abstracts International B, 37(5): 2705. (Jack P. Hailman-major professor)

ABSTRACTS

- 1983 Brockmann, H. J. Nest Sharing in Solitary Wasps: Mutualism or Parasitism? In Breed, M. D., C. D. Michener and H. E. Evans. The Biology of Social Insects. Westview Press, Boulder, CO. p. 180.
- 1990 Brockmann, H. J. Primitive eusociality: Comparisons between Hymenoptera and vertebrates. In Veeresh, G. K., B. Mallik and C. A. Viraktanuth, editors. Social Insects and the Environment. Proc. 11th. Int. Congress of IUSSI, 1990. Oxford & IBH Publ. Co., New Delhi.
- 1992 Brockmann, H.J. The effects of age on male behavior in *Limulus polyphemus*. Galaxea 11: 61-62.
- 1997 Brockmann, H.J. Sperm competition and satellite male groups in horseshoe crabs, *Limulus polyphemus*. Advances in Ethology 32: 220.
- 1999 Brockmann, H.J. The evolution of alternative strategies and tactics. Advances In Ethology 34: 1.
- 2001 Brockmann, H.J. Pattern and Process in the evolution of alternative reproductive tactics. Adv. in Ethology 36: 70.
- 2003 Brockmann, H.J. Alternative Reproductive Tactics and Life Histories. Rev. de Ethologia. 5:31.

BOOK REVIEWS AND MISCELLANEOUS

- 1977 Brockmann, H. J. Review of: *Territory* by A. W. Stokes. Animal Behaviour, 25: 252-253.
- 1984 Brockmann, H. J. Review of: *The Evolution of Insect Mating Systems* by R. Thornhill and J. Alcock. Florida Entomologist 67:180-182.
- 1984 Brockmann, H. J. Review of: *The Biology of Social Insects* by M. Breed, C. Michener and H. Evans (eds.). Amer. Sci. 72:298.
- 1988 Brockmann, H. J. Review of: *The Natural History and Evolution of North American Beewolves* by H.E. Evans and K. O'Neill. Trends in Ecology & Evolution, 3: 313-314.
- 1988 Brockmann, H. J. Why I became a scientist. Amer. Scientist. (requested for 75th anniversary issue) 76: 456.
- 1990 Brockmann, H. J. Review of: *The Selfish Gene* by R. Dawkins. Trends in Ecology and Evolution, 5(8):266-267.
- 1992 Brockmann, H. J. Review of: *The Social Biology of Wasps* by K. Ross and R. Matthews. Trends in Ecology and Evolution 7:140-141.
- 2001 Brockmann, H.J. 50 years of International Ethological Conferences. Advances in Ethology 36: I-II.
- 2006 Brockmann, H.J. Preface. Advances in the Study of Behavior 36: xi-xii.
- 2006 Brockmann, H.J. Review of: *The Evolution of Animal Communication* by W. Searcy and S. Nowicki. Bioscience 56: 849-851.
- 2007 Brockmann, H.J. Preface. Advances in the Study of Behavior 37: xi-xii.

CURRENT RESEARCH

I am an animal behaviorist interested in the evolution of alternative strategies and tactics and the economics and mechanisms of decision making. In particular, I am studying the evolution of mating and nesting behavior of horseshoe crabs. My current focus is on the evolution of multiple mating in female and group spawning by male horseshoe crabs. I am also interested in sexual selection, mate choice, and paternal care, the evolution of sex ratios, the evolution of life-history patterns and the evolution of social behavior (e.g. solitary and social wasps).

PUBLICATIONS BY MY STUDENTS (Publications based on research conducted under my direction or while in my lab)

2009. Blondel, D.V., J. Pino, and S.M. Phelps. Space use and social structure of long-tailed singing mice (*Scotinomys xerampelinus*). Journal of Mammalogy 90:715-723.
- 1991 Buchholz, R. Older males have bigger knobs: correlates of ornamentation in two species of curassow. Auk 108: 153-160.
- 1992 Buchholz, R. Confusing models with tests in studies of sexual selection: reply to Jones. Auk 109: 199-201.
- 1995 Buchholz, R. Descending whistle display and female visitation rates in the yellow-knobbed curassow, *Crax daubentoni*, in Venezuela. Ornithologia Neotropical 6: 27-36.
- 1995 Buchholz, R. Female choice, parasite load and male ornamentation in wild turkeys. Animal Behaviour, 50: 929-943.
- 1996 Buchholz, R. Thermoregulatory role of the unfeathered head and neck in male wild turkeys. Auk 113: 310-318.
- 1997 Buchholz, R. Male dominance and variation in fleshy head ornamentation in wild turkeys. Journal of Avian Biology, 28:223-230.
- 1990 Cohen, J.A. Sexual selection and the psychophysics of female choice. Zietschrift für Tierpsychologie 64: 1-8.
- 1995 Clouse, R.M. Nest usurpation and intercolonial cannibalism in *Mischocyttarus mexicanus* (Hymenoptera: Vespidae). Journal of the Kansas Entomological Society 68: 67-73.

- 1998 Clouse, R. Some effects of group size on the output of beginning nests of *Mischocyttarus mexicanus* (Hymenoptera: Vespidae). Florida Entomologist 84: 418-425.
- 1997 Eberhardt, L. A test of an environmental advertisement hypothesis for the function of drumming in yellow-bellied sapsuckers. Condor 99: 798-803.
- 2000 Eberhardt, L. Use and selection of sap trees by yellow-bellied sapsuckers. Auk 117: 41-51.
- 1984 Fink, L.S. Venom spitting by the green lynx spider, *Peucetia viridans*. Journal of Arachnology 12: 372-373.
- 1986 Fink, L.S. Costs and benefits of maternal behaviour in the green lynx spider (Oxyopidae, *Peucetia viridans*). Animal Behaviour 34: 1051-1059.
- 1987 Fink, L.S. Green lynx spider egg sacs: sources of mortality and the function of female guarding. Journal of Arachnology 15: 2231-239.
- 1995 Fink, L. S. Foodplant effects on colour morphs of *Eumorphia fasciata* caterpillars (Lepidoptera: Sphingidae). Biological Journal of the Linnean Society 56: 423-437.
- 1983 Frank, S. A hierarchical view of sex-ratio patterns. Florida Entomologist 66: 42-75.
- 1984 Frank, S. The behavior and morphology of the fig wasps *Pegoscopus assuetus* and *P. jimenezi*: descriptions and suggested behavioral characters for phylogenetic studies. Psyche 91: 189-208.
- 1985 Frank, S. Are mating and mate competition by a fig wasp *Pegoscopus assuetus* random within a fig? Biotropica 17: 170-172.
- 1985 Frank, S. Hierarchical selection theory and sex ratios. II. On applying the theory and a test with fig wasps. Evolution 39: 949-964.
- 1983 Goodfriend, G. Anemotaxis and its relation to migration in the land snail *Cepaea nemoralis*. Am. Midl. Nat. 109: 414-415.
- 1983 Goodfriend, G. Some new methods for morphometric analysis of gastropod shells. Malacological Rev. 16: 79-86.
- 1983 Goodfriend, G. Convergent evolution of shell colour patterns in two Caribbean terrestrial prosobranch snails. J. Zool. 201: 125-133.
- 1986 Goodfriend, G. Radiation of the land snail genus *Sagda* (Pulmonata: Sagdidae): comparative morphology, biogeography and ecology of the species of north-central Jamaica. Zoological Journal of the Linnean Society 87: 367-398.
- 2007 Gunnels, C.W. Seasonally variable eusocially selected traits in the paper-wasp, *Mischocyttarus mexicanus*. Ethology 113: 629-732.
- 2010 Gunnels, C.W., A. Dubrovskiy and A. Avalos. Social interactions as an ecological constraint in a eusocial insect. Animal Behaviour 75: 681-691.
- 2000 Isvaran, K. and Y. Jhala, Variation in lekking costs in blackbuck (*Antelope cervicapra*): Relationship to lek-territory location and female mating patterns. Behaviour 137: 547-563.
- 2000 McCauley, S.J., S.S. Bouchard, B.J. Farina, K. Isvaran, S. Quader, D.W. Wood, C.M. St. Mary. 2000. Energetic dynamics and anuran breeding phenology: insights from a dynamic model. Behavioral Ecology 11(4):429-436.
- 2003 Isvaran, K. and C. St. Mary. When should males lek? Insights from a dynamic state variable model. Behavioral Ecology 14:876-886.
- 2004 Isvaran, K. The blackbuck. In: Mammals of South Asia. Ed. by A.J.T. Johnsingh and K. Sukumar. In press.
- 2005 Isvaran, K. Female grouping best predicts lekking in blackbuck (*Antelope cervicapra*). Behavioral Ecology Sociobiology 57: 283-294.
- 2005 Isvaran, K. Variation in male mating behaviour within ungulate populations: patterns and processes. Current Science 89: 1192-1199.
- 2007 Isvaran, K. Intraspecific variation in group size in the blackbuck antelope: the roles of habitat structure and forage at different spatial scales. Oecologia 154(2): 4351-444.
- 2009 Chin-Baarstad, A.*, Klug, H., & Lindström, K. 2009. Should you eat your offspring before someone else does? Effect of an egg predator on filial cannibalism in the sand goby. Animal Behaviour 78:203-208.
- 2009 Klug, H. The relationship between filial cannibalism, egg energetic content, and parental condition in the flagfish. Animal Behaviour 77:1313-1319.
- 2008 Klug, H. & Lindström, K. Hurry-up and hatch: selective filial cannibalism of slower developing eggs. Biology Letters 4:160-162.
- 2008 Klug, H., St. Mary, C.M., & Clark, A.M. Isolation and characterization of microsatellite DNA markers for the flagfish, *Jordanella floridae* (Technical Note). Conservation Genetics 9:1677-1678.
- 2008 Klug, H., Kontax, C.I.*, Annis, S.*, & Vasudevan, N.** 2008. Operational sex ratio affects nest tending and aggression in the flagfish (*Jordanella floridae*). Journal of Fish Biology 72:1295-1305.
- 2007 Klug, H. & Bonsall, M.B. 2007. When to care for, abandon, or eat your offspring: the evolution of parental care and filial cannibalism. American Naturalist 170: 886-901.
- 2006 Klug, H., Lindström, K., & St. Mary, C. M. 2006. Parents benefit from eating offspring: densitydependent egg survivorship compensates for filial cannibalism. Evolution 60: 2087-2095.
- 1981 Lucas, J.R. and L.A. Stange. Key and descriptions to *Myrmeleon* larvae of Florida (Neuroptera: Myrmeleonidae). Florida Entomologist 64: 207-216.
- 1982 Lucas, J.R. The biophysics of pit construction by antlion larvae (Myrmeleon, Neuroptera). Animal Behaviour 30: 651-664.
- 1983 Lucas, J.R. The role of foraging time constraints and variable prey encounter in optimal diet choice. Am. Nat. 122: 191-209.
- 1983 Lucas, J.R. Variable foraging and cleaning behavior by juvenile leatherjackets, *Oligoplites saurus* (Carangidae). Estuaries 6: 247-250.
- 1985 Lucas, J.R. Metabolic rates and pit-construction costs of two antlion species. Journal of Animal Ecology 54: 295-309.
- 1985 Lucas, J.R. Partial prey consumption by antlion larvae. Animal Behaviour 33: 945-958.
- 1986 Lucas, J.R. Ants and antlions: kleptoparasitism of predators by prey. Florida Entomologist 69: 702-710.
- 1992 Masters, K. L., A.R. Masters and A. Forsyth. Female-biased sex ratio in the neotropical treehopper *Umbonia ataliba* (Homoptera/Membracidae). Ethology 96: 353-366.
- 1990 Mora, G. Paternal care in a neotropical harvestman. Animal Behaviour 39: 582-593.
- 1992 Obin, M. Spiders living at wasp nesting sites: what constrains predation by mud daubers? Psyche 89: 321-335.
- 1987 Landes, D.A., Obin, M., A.B. Cady, J.H. Hunt. Seasonal and latitudinal variation in spider prey of the mud dauber *Chalybion californicum*, Hymenoptera, Sphecidae. Journal of Arachnology 15: 249-256.
- 1995 Osorno, J.L. The function of hatching asynchrony in the blue-footed booby. Behavioral Ecology and Sociobiology 37:265-273.
- 1999 Osorno, J.L. Offspring desertion in the Magnificent Frigatebird: Are males facing a trade-off between current and future reproduction? Journal of Avian Biology 30: 335-341.

- 2004 Osorno, J.L. and T. Székely. Sexual conflict and parental care in magnificent frigatebirds: full compensation by deserted females. Animal Behaviour 68: 337-342.
- 1997 Ploger, B. Does brood reduction provide nestling survivors with a food bonus? Animal Behaviour 54: 1063-1076.
- 2004 Quader, S., K. Isvaran, R. Hale, B. Miner and N. Seavy. Nonlinear relationships and independent contrasts. Journal of Evolutionary Biology 17:709-715.
- 2005 Quader, S. Probable hybridization between the weaverbirds *Ploceus philipi* and *P. manyar*. Journal of the Bombay Natural History Society. (in press)
- 2005 Quader, S. Elaborate nests in a weaverbird: a role for female choice? Ethology 111:1073-1088
- 2005 Quader, S. Mate choice and its implications for conservation and management. Current Science 89: 1220-1229.
- 2006 Quader, S. Sequential settlement by nesting male and female Baya weaverbirds *Ploceus philippinus*: the role of monsoon winds. Journal of Avian Biology, **37**, 396-404.
- 2006 Quader, S. What makes a good nest? Benefits of nest choice to female Baya Weavers (*Ploceus philippinus*). Auk, 123, 475-486.
- 2010 Rittschof, C. and K.V. Ruggles. The complexity of site quality: multiple factors affect web tenure in orb-web spider. Animal Behavior 79:1147-1155.
- 2010 Rittschof, C. Male density affects large-male advantage in the golden silk spider, *Nephila clavipes*. Behavioral Ecology 21:979-985.
- 2011 Constant, N., Valbuena, D. & Rittschof, C.C. Male contest investment changes with male body size but not female quality in the spider *Nephila clavipes*. Behavioural Processes, 87: 218-223.
- 2011 Rittschof, C.C. Mortality risk affects mating decisions in the spider *Nephila clavipes*. Behavioral Ecology, 22: 350-357.
- 2011 Michalik P. & Rittschof, C.C. A comparative analysis of the morphology and evolution of permanent sperm depletion in spiders. PLoS ONE 6:e16014.
- 2012 Rittschof, C.C. Temperature affects egg development and web site selection in *Nephila clavipes*. Journal of Arachnology, 40: 141-145.
- 2012 Rittschof, C.C., Hilber, S.A., Tudor, M.S. & St. Mary, C.M. Male reproductive strategies and optimal mate number in an orb-web spider. Behavioral Ecology, 23: 1-10.
- 1994 Shafir, S. Intransitivity of preferences in honey bees: support for 'comparative' evaluation of foraging options. Anim. Behav. 48: 55-67.
- 2003 Sirot, L. The evolution of insect mating structures through sexual selection. Florida Entomologist 86:124-133.
- 1999 Sirot, L. K. Reproductive behavior of two female morphs of the damselfly, *Ischnura ramburi*. American Zoologist, **39**, 23A-23A.
- 2006 Sirot, L. K., Lapointe, S. L., Shatters, R. & Bausher, M. Transfer and fate of seminal fluid molecules in the beetle, *Diaprepes abbreviatus*: Implications for the reproductive biology of a pest species. Journal of Insect Physiology, **52**, 300-308.
- 2007 Smith, M.D. Use of mammal manure by nesting burrowing owls: a test of four functional hypotheses. Animal Behaviour 73: 65-73.
- 2001 Vélez, M., M.D. Jennions, S.R. Telford. The effect of an experimental brood reduction on male desertion in the Panamanian blue acara cichlid, *Aequidens coeruleopunctatus*. Ethology. 108:331-340.