

SARA MARGERY LEWIS

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EDUCATION

1984 Ph.D. in Zoology (Minor: Mathematics), Duke University
1976 A.B. *magna cum laude* in Biology, Harvard College

ACADEMIC POSITIONS

2006- Professor, Department of Biology, Tufts University
1997-06 Associate Professor, Department of Biology, Tufts University
1991-97 Assistant Professor, Department of Biology, Tufts University
1985-90 Postdoctoral Fellow, Organismic and Evolutionary Biology, Harvard University

HONORS & AWARDS

Radcliffe Institute for Advanced Study, Harvard - Science Scholar Postdoctoral Fellowship (1988-1990)
American Association of University Women, Berliner Postdoctoral Fellowship (1987-88)
National Science Foundation, Doctoral Dissertation Improvement Award (1982-84)
Smithsonian Institution, Walter Bacon Predoctoral Fellowship (1981-83)
National Science Foundation, Graduate Fellowship (1978-81)

RESEARCH GRANTS

2015 **Tufts University, Faculty Research Award:** “*Disentangling sex: harnessing evolution to study postmating interactions at the molecular level*” (\$5000), PI

2012 **Tufts University, Technology Access Grant:** “*Dancing the reproductive tango: characterizing female genes that mediate postmating sexual interactions*” (\$2000), co-PI

2010-11 **U.S. National Science Foundation REU Supplement:** “*Connecting Episodes of Sexual Selection in Bioluminescent Fireflies*” (\$6,000), PI

2010-12 **U.S. National Science Foundation** Doctoral Dissertation Improvement Grant: “*Examining the role of reproductive proteins using RNAi in Tribolium Flour Beetles*” (\$12,604, co-PI)

2006-12 **U.S. National Science Foundation:** “*Connecting Episodes of Sexual Selection in Bioluminescent Fireflies*” (\$300,001), PI

2006-12 **U.S. Department of Agriculture:** “*Genetic and Environmental Influences on Reproductive Performance in Tribolium Flour Beetles*” (\$389,000), PI

2006 **Smithsonian Institution Caribbean Coral Reef Ecosystems (CCRE):** “*Investigating the Role of Nitric Oxide in Regulating Bioluminescence of Marine Organisms*” (\$2400), PI

2005 **Smithsonian Institution CCRE**, co-PI

- 2005 **Tufts Faculty Research Award** "*Nutritional influences on sexual selection*" (\$5000)
- 2005 **Tufts University, Academic Technology APT Award:** "*Applying Technology to Enhance Statistics Learning – ConStats Evolution*", co-PI
- 2004 **Smithsonian Institution CCRE**, co-PI
- 2004 **Tufts Faculty Research Award** "*Dissecting firefly courtship signals*" (\$1500)
- 2003-06 **U.S. National Science Foundation:** "*Tufts REU Site: Mentoring Biological Research as a Collaborative Enterprise*" (\$198,328), co-PI
- 2003 **Smithsonian Institution CCRE**, co-PI
- 2002 **Tufts Faculty Research Award** "*Sexual selection and speciation in fireflies*" \$5000
- 1998-04 **U.S. National Science Foundation:** "*The Role of Male-Donated Nutrients in Photinus Fireflies*" (\$200,325), PI
- 1998-00 **Tufts Berger Technology Transfer Award:** "*A Biologist's Guide to Library Resources*", PI
- 1982-84 **U.S. National Science Foundation** Doctoral Dissertation Improvement Grant: "*The role of fish herbivory in coral reef communities*", PI.
- 1982 **Sigma-Xi** Grant-in-Aid of Research
- 1982 **American Museum of Natural History**, Lerner-Grey Fund Award
- 1975-76 **U.S. National Science Foundation** Student-Originated Studies Grant: "*Nutrient Budget and Eutrophication of Squam Lakes, New Hampshire.*" PI.

FIELD RESEARCH EXPEDITIONS

- 2017 **Taipei & Alishan National Scenic Area, Taiwan:** *Conservation in Taiwanese fireflies*
- 2014 **Great Smoky Mountain National Park:** *Sexual communication in Blue Ghost fireflies*
- 2013 **Smithsonian Institution Caribbean Coral Reef Ecosystem Program, Belize:** *Visual communication in mantis shrimp*
- 2011-13 **Great Smoky Mountain National Park:** *Reproductive ecology and predation on synchronous Smokies fireflies*
- 2008 **Chiang Mai, Thailand:** *Sexual dimorphism in Southeast Asian fireflies*
- 2006-08 **Smithsonian Institution Caribbean Coral Reef Ecosystem Program, Belize:** *Vacancy chain dynamics in hermit crabs*
- 2006 **Kyoto University, Japan:** *Nuptial gifts in Japanese fireflies*
- 2004 **Smithsonian Institution Caribbean Coral Reef Ecosystem Program, Belize:** *Corallivory on tropical reefs*
- 1994 **NOAA Aquarius Undersea Habitat (Key Largo Florida):** *Aquanaut on 10-day saturation dive mission to study effects of zooplankton flux and flow rate on feeding rates of blue chromis fishes*
- 1986 **NOAA Hydrolab Underwater Habitat (St. Croix, USVI):** *Aquanaut on 7-day saturation dive mission to investigate temporal patterns of chemical defense in the tropical seaweed Halimeda*

1979-84 **Smithsonian Institution Caribbean Coral Reef Ecosystem Program, Belize:** *Effects of fish herbivory on coral reef benthic communities*

PROFESSIONAL ORGANIZATIONS

American Association for the Advancement of Science, American Society of Naturalists, Animal Behavior Society, Ecological Society of America, International Society for Behavioral Ecology, Society for the Study of Evolution

PROFESSIONAL SERVICE

Chair, Fireflyers International Network Steering Committee (2017-), Editorial Board of *Functional Ecology* (2008-16), Editorial Board of *Northeastern Naturalist* (2005-11), US National Science Foundation Advisory Panel (2004, 2006, 2011), external reviewer for: NSF (US), National Oceanographic and Atmospheric Administration (USA), Natural Environment Research Council (UK), National Science Foundation (Switzerland), NSERC (Canada), US-Israel Binational Agricultural Research and Development Fund; National Geographic Expeditions Council, manuscript reviewer for numerous journals, including: *Nature*, *PloS One*, *PNAS*, *The American Naturalist*, *Ecology*, *Behaviour*, *Behavioral Ecology*, *Ecology & Evolution*, *Ethology*, *Evolution*, *Journal of Evolutionary Biology*, *Journal of Experimental Marine Biology and Ecology*, *Marine Biology*, *Marine Ecology Progress Series*, *Naturwissenschaften*, *Zoological Journal of the Linnean Society*, *Animal Behaviour*, *Behavioral Ecology and Sociobiology*, *Journal of Insect Behavior*, *Insect Conservation*, *Physiological Entomology*, *Journal of Insect Physiology*, *Molecular Ecology*, *Proceedings of the Royal Society of London*, *BMC Evolutionary Biology*

INVITED TALKS (PAST 10 YEARS)

Luigi Mastroianni Memorial Lecture, Marine Biological Lab. Cambridge Entomological Club. Invited Keynote, International Firefly Symposium, Taiwan. University of Ryukyus, Okinawa; Endicott College, Inaugural STEM Lecture; Kyoto University, Japan; International Nitric Oxide Society, Sendai Japan; IgNobel Prize Ceremony, 24/7 Talk; Mainstage talk @ [TED2014](#), Vancouver; Royal Entomological Society (Plenary Address for *Evolution of Nuptial Gifts* symposium), St. Andrews, Scotland; Yale University; University of British Columbia; Harvard University (Plenary address for *Mind, Brain, Behavior Conference*); U-Mass Amherst; Cornell University; International Nitric Oxide Society, Kyoto, Japan; SICB Symposium, Toronto: *Fireflies at 50*

CONTRIBUTED TALKS (PAST 10 YEARS)

2017 – International Firefly Symposium – Taipei; 2016 - International Society for Behavioral Ecology - Exeter U.K; 2015 - Behaviour, Cairns Australia; International Society for Behavioral Ecology, NYC; 2014- International Society for Behavioral Ecology; International Firefly Symposium, Gainesville FL; 2013 – Animal Behavior Society; 2012 - Joint U.S.- European Evolution Congress, Ottawa; 2011 – Society for the Study of Evolution, Oklahoma; 2010 – Animal Behavior Society, Williamsburg. 2009 - Society for Integrative and Comparative Biology. 2008 – International Society for Behavioral Ecology,

Ithaca; International Coral Reef Symposium, Miami; International Firefly Symposium, Chiang Mai Thailand. 2007 – Society for Integrative and Comparative Biology; Animal Behavior, Vermont; Ecological Society of America, Utah; Entomological Society of America, California; 2006 - Benthic Ecology Meetings, Quebec City; International Society for Reef Studies, Germany.

PUBLISHED ARTICLES & CHAPTERS (PEER-REVIEWED)

Google Scholar h-index = 37, total citations = 4262 (as of Jan 2018)

* indicates student co-authors

1. Al-Wathiqui, N.*, E.B. Dopman, and **S.M. Lewis**. 2017. Molecular dissection of nuptial gifts in divergent strains of *Ostrinia* moths. *Physiological Entomology*, DOI: 10.1111/phen.12220.
2. Franklin, A.M.*, M.B. Applegate, **S.M. Lewis**, and F.G. Omenetto. 2017. Stomatopods detect and assess achromatic cues in contests. *Behavioral Ecology*, 28:1339-1336.
3. Al-Wathiqui, N.*, T. R. Fallon*, A. South, J.K. Weng, and **S.M. Lewis**. 2017. Molecular characterization of firefly nuptial gifts: a multi-omics approach sheds light on postcopulatory sexual selection. *Scientific Reports* 6: 38556.
4. Al-Wathiqui, N.*, E.B. Dopman, and **S.M. Lewis**. 2016. Postmating transcriptional changes in the female reproductive tract of the European corn borer moth. *Insect Molecular Biology* 25:629-645.
5. Franklin, A.M.*, N. J. Marshall, and **S.M. Lewis**. 2016. Multimodal signals: Ultraviolet reflectance and chemical cues in stomatopod agonistic encounters. *R. Soc. Open Sci.* 3: 160329.
6. Bonoan, R.E.*, N. Al-Wathiqui*, and **S.M. Lewis**. 2015. Linking larval nutrition to adult reproductive traits in the European corn borer *Ostrinia nubilalis*. *Physiological Entomology* 40: 309–316.
7. **Lewis, S.M.**, Vahed, K., Koene J.M., Engqvist, L., Bussière, L.F., Perry, J.C., Gwynne, D. and Lehmann, G.U.C. 2014. Emerging issues in the evolution of animal nuptial gifts. *Biology Letters* 10: 20140336.
8. Al-Wathiqui, N.*, Dopman, E., and **Lewis, S.M.** 2014. Using RNA sequencing to characterize female reproductive genes between Z and E strains of the European corn borer moth. *BMC Genomics* 15:189.
9. Tigreros, N.*, Mowery, M.*, and **S.M. Lewis**. 2014. Male mate choice favors more colorful females in the gift-giving cabbage butterfly. *Behavioral Ecology and Sociobiology* 68:1539-1547.
10. De Cock, R. Faust, L., and **Lewis, S.M.** 2014. Courtship and mating in *Phausis reticulata*, the Blue Ghost Firefly: Male flight behaviors, female glow displays, and male attraction to light traps. *Florida Entomologist* 97: 1290-1307.
11. Tigreros, N.*, E. Sass*, and **S.M. Lewis**. 2013. Sex-specific response to nutrient limitation and its effects on female mating success in a gift-giving butterfly. *Evolutionary Ecology* 27:1145–1158.
12. Bauer, C.M.*, G. Nachman, **S.M. Lewis**, L. Faust, J. M. Reed. 2013. Modeling effects of harvest on firefly population persistence. *Ecological Modelling* 256: 43-52.
13. South, A.* and **S.M. Lewis**. 2012. Determinants of reproductive success across sequential episodes of sexual selection in a firefly. *Proceedings of the Royal Society B* 279: 3201-3208.
14. doi: <http://dx.doi.org/10.1098/rspb.2012.0370>

15. **Lewis, S.M.** and A. South*. 2012. The evolution of animal nuptial gifts. *Advances in the Study of Behavior* 44: 53-97.
16. Fu, X., A. South*, and **S.M. Lewis**. 2012. Sexual dimorphism, mating systems, and nuptial gifts in two Asian fireflies. *Journal of Insect Physiology* 58: 1485-1492.
17. South, A*. and S.M. Lewis. 2012. Effects of male ejaculate on female reproductive output and longevity in *Photinus* fireflies. *Canadian Journal of Zoology* 90: 677-681.
18. **Lewis, S.M.**, N. Tigreros*, T. Fedina, and Q.L. Ming. 2012. Genetic and nutritional effects on male traits and reproductive performance in *Tribolium* flour beetles. *Journal of Evolutionary Biology* 25: 25: 438-451.
19. Long, S.M.*, **S. Lewis**, L. Jean-Louis, G. Ramos, J. Richmond, and E.M. Jakob. 2012. Firefly flashing and jumping spider predation. *Animal Behaviour* 83: 81-86.
20. **Lewis, S.M.**, L. Faust, and R. De Cock. 2012. The dark side of the Light Show: Predation on fireflies of the Great Smokies. *Psyche* 2012: 1-7. doi:10.1155/2012/634027
21. Faust, L. , R. De Cock and **S.M. Lewis**. 2012. Thieves in the night: Kleptoparasitism by *Photuris* fireflies (Coleoptera: Lampyridae). *Coleopterists Bulletin* 66:1-6.
22. **Lewis, S.M.**, A. South*, N. Al-Wathiqui*, and R. Burns*. 2011. Quick guide: Nuptial gifts. *Current Biology* 21: 644-645.
23. South, A.* , L. Sirot, and **S.M. Lewis**. 2011. Identification of predicted seminal fluid proteins in *Tribolium castaneum*. *Insect Molecular Biology* 20: 447-456.
24. South, A.* , K. Stanger-Hall, M.L. Jeng, and **S.M. Lewis**. 2011. Correlated evolution of female neoteny and flightlessness with male spermatophore production in fireflies (Coleoptera: Lampyridae). *Evolution* 65: 1099-1113.
25. Tigreros, N.* and **S.M. Lewis**. 2011. Direct and correlated responses to artificial selection on sexual size dimorphism in the flour beetle, *Tribolium castaneum*. *Journal of Evolutionary Biology* 24: 835-842.
26. South, A.* and **S.M. Lewis**. 2011. The influence of male ejaculate quantity on female fitness: a meta-analysis. *Biological Reviews of the Cambridge Philosophical Society* 86: 299-309.
27. Ming, Q.L. and **S.M. Lewis**. 2010. Pheromone production by male *Tribolium castaneum* is influenced by diet quality. *Journal of Economic Entomology* 103: 128-133.
28. Ming, Q.L. and **S.M. Lewis**. 2010. Mate-recognition & sex differences in cuticular hydrocarbons in a diurnal firefly, *Ellychnia corrusca*. *Annals of the Entomological Society of America* 103:128-133.
29. Sharkey, E.* , A. South*, C. Cratsley, P. Moosman, and **S.M. Lewis**. 2010. Assessing condition-dependence of male flash signals in *Photinus* fireflies. *Journal of Insect Behavior* 23:215-225.
30. Rotjan, R.D. and **S.M. Lewis**. 2010. Social context of shell acquisition in *Coenobita clypeatus* hermit crabs. *Behavioral Ecology* 20:639 - 646.
31. **Lewis, S.M.** and R.D. Rotjan. 2009. Vacancy chains provide aggregate benefits to *Coenobita clypeatus* hermit crabs. *Ethology* 115: 356-365.
32. Rotjan, R.D.* and **S.M. Lewis**. 2009. Predators selectively graze reproductive structures in a clonal marine organism. *Marine Biology* 156: 569-577.
33. Tigreros, N.* , A. South*, T. Fedina, and **S.M. Lewis**. 2009. Does fertilization by proxy occur in *Tribolium* beetles? A replicated study of a novel mechanism of sperm transfer. *Animal Behaviour* 77:555-557.

34. LeVan, K.*, T. Fedina, and **S.M. Lewis**. 2009. Testing multiple hypotheses for the maintenance of male homosexual copulatory behavior in flour beetles. *Journal of Evolutionary Biology* 22:60-70.
35. Rotjan, R.D.* and **S.M. Lewis**. 2008. The impact of coral predators on tropical reefs. *Marine Ecology Progress Series* 367: 73–91.
36. South, A*., K. LeVan*, L. Leombruni, C. Orians, and **S.M. Lewis**. 2008. Examining the role of cuticular hydrocarbons in firefly species recognition. *Ethology* 114: 916–92.
37. Fedina, T*. and **S.M. Lewis**. 2008. An integrative view of sexual selection in *Tribolium* flour beetles. *Biological Reviews of the Cambridge Philosophical Society* 83: 151-171.
38. South, A*., T. Sota, N. Abe, M. Yuma, and **S.M. Lewis**. 2008. The production and transfer of spermatophores in three Asian species of *Luciola* fireflies. *Journal of Insect Physiology* 54: 861-866.
39. **Lewis, S.M.** and C.K. Cratsley. 2008. Flash signal evolution, mate choice and predation in fireflies. *Annual Review of Entomology* 53:293–321.
40. Woods, W., H. Hendrickson*, J. Mason*, and **S.M. Lewis**. 2007. Energy and predation costs of firefly courtship signals. *The American Naturalist* 170: 702-708.
41. Fedina, T.* and **S.M. Lewis**. 2007. Effect of *Tribolium castaneum* (Coleoptera: Tenebrionidae) nutritional environment, sex and mating status on response to commercial pheromone traps *Journal of Economic Entomology* 100: 1924-1927.
42. Fedina, T.* and **S.M. Lewis**. 2007. Female mate choice across mating stages and between sequential mates in flour beetles. *Journal of Evolutionary Biology* 20:2138-2143.
43. Demary, K.* and **S.M. Lewis**. 2007. Male courtship attractiveness and paternity success in *Photinus greeni* fireflies. *Evolution* 61:431-439.
44. Demary, K.* and **S.M. Lewis** 2007. Male reproductive allocation in *Photinus* fireflies. *Invertebrate Biology* 126: 74-80.
45. Fedina, T.* and **S.M. Lewis**. 2006. Proximal traits and mechanisms for biasing paternity in the red flour beetle *Tribolium castaneum*. *Behavioral Ecology and Sociobiology* 60:844-853.
46. Rotjan, R.D.* and **S.M. Lewis**. 2006. Parrotfish abundance and selective corallivory on a Belizean coral reef. *Journal of Experimental Marine Biology and Ecology* 335: 292-301.
47. Rotjan, R.D.* , J. Dimond, D. Thornhill, J. Leichter , B. Helmuth, D. Kemp, and **S.M. Lewis**. 2006. Chronic parrotfish grazing impedes coral recovery after bleaching. *Coral Reefs* 25:361-368.
48. Demary, K.* , C. Michaelidis*, and **S.M. Lewis**. 2006. Firefly courtship: Behavioral and morphological predictors of male mating success in *Photinus greeni*. *Ethology* 112:485-492.
49. Michaelidis, C.* , Demary, K.* , and **S.M. Lewis**. 2006. Male courtship signals and female signal assessment in *Photinus greeni* fireflies. *Behavioral Ecology* 17:329-335.
50. Rotjan, R.D.* and **S.M. Lewis**. 2005. Selective predation by parrotfishes on the reef coral, *Porites asteroides*. *Marine Ecology Progress Series* 305: 193-201.
51. **Lewis, S.M.**, A. Kobel*, T. Fedina*, and R.W. Beeman. 2005. Sperm stratification and paternity success in red flour beetles. *Physiological Entomology* 30: 303-307.
52. Cratsley, C.K. and **S.M. Lewis**. 2005. Seasonal variation in mate choice of *Photinus ignitus* fireflies. *Ethology* 111:89-100.
53. **Lewis, S.M.**, C.K. Cratsley, and K. Demary. 2004. Mate recognition and choice in *Photinus* fireflies. *Annales Zoologici Fennici* 41:809-821.

54. **Lewis, S.M.**, C.K. Cratsley, and J.A. Rooney. 2004. Nuptial gifts and sexual selection in *Photinus* fireflies. *Integrative and Comparative Biology* 44: 234-237.
55. Fedina, T.Y.* and **S.M. Lewis**. 2004. Female influence over offspring paternity in the red flour beetle *Tribolium castaneum*. *Proceedings of the Royal Society of London Series B* 271:1393-1399.
56. Rotjan R.D., J. Blum*, and **S.M. Lewis**. 2004. Shell choice in *Pagurus longicarpus* hermit crabs: does predation threat influence shell choice behavior? *Behavioral Ecology and Sociobiology* 56:171-176.
57. **Lewis, S.M.** 2004. Multiple mating and repeated copulations; effects on male reproductive success in red flour beetles. *Animal Behaviour* 67:799-804.
58. Cratsley, C.K.*, J. Rooney*, and **S.M. Lewis**. 2003. Limits to nuptial gift production by male fireflies, *Photinus ignitus*. *Journal of Insect Behavior* 16: 361-370.
59. Cratsley, C.K.* and **S.M. Lewis**. 2003. Female preference for male courtship flashes in *Photinus ignitus* fireflies. *Behavioral Ecology* 14: 135-140.
60. Aprille, J., C. Lagace, **S. Lewis**, T. Michel, J. Modica-Napolitano, B. Trimmer, R. Zayas*. 2002. Mechanism of firefly flash control: nitric oxide inhibition of oxygen consumption in lantern mitochondria is reversed by light. *Luminescence* 17: 79-82.
61. Rooney, J.A* and **S.M. Lewis**. 2002. Fitness advantage of nuptial gifts in female fireflies. *Ecological Entomology* 27:373-377.
62. Trimmer, B.A., J.R. Aprille, D.M. Dudzinski*, C.J. Lagace, **S.M. Lewis**, T. Michel, S. Qazi, and R.M. Zayas*. 2001. Nitric oxide and the control of firefly flashing. *Science* 292: 2486-2488.
63. Rooney, J.* and **S.M. Lewis**. 2000. Notes on the life history and mating behavior of *Ellychnia corrusca* (Coleoptera: Lampyridae). *Florida Entomologist* 83:324-334.
64. Pechenik, J. and **S.M. Lewis**. 2000. Avoidance of drilled gastropod shells by *Pagurus longicarpus* hermit crabs at Nahant, MA. *Journal of Experimental Marine Biology and Ecology*, 253:17-32.
65. Masonjones, H.D*. and **S.M. Lewis**. 2000. Differences in potential reproductive rates of male and female seahorses related to courthship roles. *Animal Behaviour* 59: 11-20.
66. Rooney, J* and **S.M. Lewis**. 1999. Differential allocation of male-derived nutrients in two lamyprid beetles with contrasting life-history characteristics. *Behavioral Ecology* 10:97-104.
67. Bloch Qazi, M.*, C.R.B. Boake, and **S.M. Lewis**. 1998. The femoral setiferous glands of *Tribolium castaneum*. males and production of the pheromone 4,8-dimethyldecanal. *Entomologia Experimentalis at Applicata* 89: 313-317.
68. Bloch Qazi, M.*, J.R. Aprille, and **S.M. Lewis**. 1998. Female role in sperm storage in the red flour beetle, *Tribolium castaneum*. *Comparative Biochemistry and Physiology Part A* 120: 641-647.
69. **Lewis, S.M.** and E. Jutkiewicz*. 1998. Sperm storage and sperm precedence in multiply-mated red flour beetles. *Behavioral Ecology and Sociobiology* 43: 365-69.
70. Colson, D.*, S. Patek, E.L. Brainerd, and **S.M. Lewis**. 1998. Sound production during feeding in *Hippocampus* seahorses. *Environmental Biology of Fishes* 51:221-229.
71. van der Reijden, E.*, J. Monchamp, and **S.M. Lewis**. 1997. The formation, transfer, and fate of male spermatophores in *Photinus* fireflies (Coleoptera: Lampyridae). *Canadian Journal of Zoology* 75: 1202-1205.

72. Bloch Qazi, M.C.*, J. Herbeck*, and **S.M. Lewis**. 1996. Mechanisms of sperm transfer and storage in the red flour beetle, *Tribolium castaneum*. *Annals of the Entomological Society of America* 89: 892-897.
73. Masonjones, H.D.* and **S.M. Lewis**. 1996. Courtship behavior in the dwarf seahorse, *Hippocampus zosterae*. *Copeia* 1996(3): 634-40.
74. **Lewis, S.M.** and J. Iannini*. 1995. Fitness consequences of differences in male mating behaviour in relation to female reproductive status in flour beetles. *Animal Behaviour* 50:1157-1160.
75. **Lewis, S.M.** and J.D. Monchamp, 1994. Sexual and temporal differences in phorid parasitism of *Photinus marginellus* (Coleoptera: Lampyridae) fireflies. *Annals of the Entomological Society of America* 87:572-575.
76. **Lewis, S.M.** and S.N. Austad, 1994. Sexual selection in flour beetles: The relationship between sperm precedence and male olfactory attractiveness. *Behavioral Ecology* 5: 219-224.
77. **Lewis, S.M.** and O. Wang*, 1991. Reproductive ecology of two species of *Photinus* fireflies (Coleoptera: Lampyridae). *Psyche* 98: 293-307.
78. **Lewis, S.M.** and S.N. Austad, 1990. Sources of intraspecific variation in sperm precedence in red flour beetles. *The American Naturalist* 135:351-359.
79. Hay, M.E., V.J. Paul, **S.M. Lewis**, K. Gustafson, J. Tucker, and R. Trindell, 1988. Can tropical seaweeds reduce herbivory by growing at night? Diel patterns of growth, nitrogen content, herbivory, and chemical versus morphological defenses. *Oecologia* 75:233-245.
80. **Lewis, S.M.**, J.N. Norris, and R.B. Searles, 1987. The regulation of morphological plasticity in tropical reef algae by herbivory. *Ecology* 68:636-641.
81. Reinthal, P.R. and **S.M. Lewis**, 1986. Social behavior and foraging efficiency in a group of tropical surgeonfishes (Acanthuridae). *Animal Behaviour* 34:1687-1693.
82. **Lewis, S.M.**, 1986. The role of herbivorous fishes in the organization of a Caribbean reef community. *Ecological Monographs* 56:183-200.
83. **Lewis, S.M.**, 1985. Herbivory on coral reefs: Algal susceptibility to herbivorous fishes. *Oecologia* 65:370-375.
84. **Lewis, S.M.** and P.C. Wainwright, 1985. Herbivore abundance and grazing intensity on a Caribbean coral reef. *Journal of Experimental Marine Biology and Ecology* 87:215-228.
85. Reinthal, P.R., B. Kensley, and **S.M. Lewis**, 1984. Dietary shifts in the queen triggerfish *Balistes vetula* in the absence of its primary food item, *Diadema antillarum*. *Marine Ecology* 5:191-195.
86. Searles, R.B. and **S.M. Lewis**, 1983. North Carolina marine algae XI. A new species of *Helminthocladia* (Liagoraceae, Nemaliales, Rhodophyta) with a reappraisal of the generic limits of *Helminthocladia* and *Helminthora*. *Journal of Phycology* 19:164-172.
87. **Lewis, S.M.** and B. Kensley, 1982. Notes on the ecology and behavior of *Pseudamphithoides incurvaria* (Amphithoidae, Amphipoda). *Journal of Natural History* 16:267-274.
88. **Lewis, S.M.**, 1982. Sponge-zoanthid associations: Functional interactions. *Smithsonian Contributions to the Marine Sciences* 12: 465-474.

BOOKS & BOOK CHAPTERS

1. **Lewis, S.** 2016. [*Silent Sparks: The Wondrous World of Fireflies*](#). Princeton University Press. 250 pp.

2. Fedina, T.Y., **S.M. Lewis**. 2015. Evaluating cryptic female choice in highly promiscuous *Tribolium* beetles. Pp. 431-459 In A. V. Peretti and A. Aisenberg (eds), *Cryptic Female Choice in Arthropods: Patterns, Mechanisms and Prospects*, Springer, NY.
3. **Lewis, S.M.** 2009. Bioluminescence and sexual signaling in fireflies. In *Bioluminescence in Focus – A Collection of Illuminating Essays* (V.B. Meyer-Rochow, ed). Research Signpost, Kerala India.
4. Aprille, J.R., C. Lagace, **S.M. Lewis**, T. Michel, J. Modica-Napolitano, B. Trimmer, and R. Zayas. 2002. Mechanism of firefly flash control. pp. 25-28 in P. Stanley and L. Kricka (eds), *Bioluminescence & Chemiluminescence: Progress & Current Applications*, World Scientific Publishing, Singapore.
5. Cohen, S. and **S.M. Lewis**. 1997. *Conceptualizing Statistics: A Guided Workbook for Experimenting with ConStatS*. Prentice-Hall, NJ.

SCIENCE OUTREACH ACTIVITIES

Talks

- 2015 [24/7 Talk](#) Ig Nobel Prize Ceremony
- 2014 [TED2014](#) Mainstage, Vancouver B.C.
- 2011 Town of Maibara, Japan - Annual Firefly Festival
- 2016 Harvard Arnold Arboretum, Massachusetts Audubon Society, Brooklyn Public Library, Museum of Science, Harvard Bookstore, Oregon Museum of Science and Industry

Web content

Science outreach videos available on [Vimeo](#)

Writings

- 2001 “*Flashes in the Night*” Audubon Sanctuary Magazine
- 2003 “*Summer flings: firefly courtship, sex, and death*” Natural History Magazine
- 2012 *World Book Encyclopedia* “Firefly” entry
- 2016 *Silent Sparks: The Wondrous World of Fireflies* (Princeton) – Winner of IPPY 2016 Best Science/Nature Book (Independent Publisher Book Awards)
- “*The Mysteries of Firefly Sex: A Scientist’s Notes from the Field*” [Scientific American](#)
- “*Night Workers: How Evolution Drives the Firefly Dance*” [The Guardian](#)
- “*Are Fireflies Flickering Out?*” [CNN Opinion](#)
- 2017 “*For the Sake of their Glow*” Undark Magazine

Media outreach

- [National Geographic](#) - Liz Langley (December 2016): *Why animals give strange gifts*
- [New York Times](#) - Natalie Angier (December 2013): *For that Zeus bug in your life*
- [BBC Nature](#) (July 2012): *Gifts are secret of firefly sex*
- [New York Times](#) – Carl Zimmer (June 2009): *Blink twice if you like me*
- [Science Daily](#) (September 2007): *Hidden costs of firefly flashing*
- [Tufts Journal](#) (Feb 2004): *Firefly flash dance illuminates mating prowess*
- [Tufts e-News](#) (April 2003): *Bragging lights*
- [AAAS News](#) (2003): *Study reports on chemical turn-ons for fireflies*
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Other

Chair, Firefly Specialist Group for International Union for the Conservation of Nature (IUCN);
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