

## Research and Educational Publications from Shoals Marine Laboratory

This list includes publications based on work conducted at the Isles of Shoals using facilities and vessels of Shoal Marine Laboratory. Papers are listed in reverse chronological order. Asterisks (\*) denote an author who was an REU or RIFS student. Authors indicated in bold currently lead major research or survey programs at SML. Some publications include SML contribution numbers in their text or acknowledgments; such contribution numbers are noted in this list.

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1. Dantzker, M. and D.O. Brown. 2009. *Signals for Survival* (High-definition video). Sinauer, Sunderland, Massachusetts. 38 minutes.
2. Freeman, A., J. Meszaros\*, and **J.E. Byers**. 2009. Poor phenotypic integration of blue mussel inducible defenses in multiple predator environments. *Oikos* 10.1111/j.1600-0706.2008.17176.x.
3. Perez, K.O., R.L. Carlson, M.J. Shulman, **J.C. Ellis**. 2009. Why are intertidal snails rare in the subtidal? Predation, growth and the vertical distribution of *Littorina littorea* (L.) in the Gulf of Maine. *Journal of Experimental Marine Biology and Ecology* **369**:79-86.
4. Blakeslee, A. and **J.E. Byers**. 2008. Using parasites to inform ecological history: comparisons among three congeneric marine snails. *Ecology* **89**:1068-1078.
5. Blakeslee, A., **J.E. Byers**, M.P. Lesser. 2008. Solving cryptogenic histories using host and parasite molecular genetics: the resolution of *Littorina littorea*'s North American origin. *Molecular Ecology* **17**:3684-3696.
6. Bogomolni, A., R. Gast, **J.C. Ellis**, M. Dennett, K. Pugliares, B. Lentell, and M. Moore. 2008. Victims or vectors: A survey of vertebrate zoonoses from coastal waters of the Northwest Atlantic. *Diseases of Aquatic Organisms* **81**:13-38.
7. **Byers, J.E.**, A. Blakeslee, E. Linder, A. Cooper, and T. Maguire\*. 2008. Controls of spatial variation in the prevalence of trematode parasites infecting a marine snail. *Ecology* **89**:439-451.
8. **Ellis, J.C.**, M.C. Stoddard, and L.W. Clark. 2008. Breeding by a Lesser Black-backed Gull (*Larus fuscus*) on the Atlantic coast of North America. *North American Birds* **61**:546-548. Shoals Marine Laboratory Contribution #144.
9. Nichols, W.F. and V.C. Nichols. 2008. The land use history, flora, and natural communities of the Isles of Shoals, Rye, New Hampshire and Kittery, Maine. *Rhodora* **110**:245-295.
10. Passino, K.M., **T.D. Seeley**, and P.K. Visscher. 2008. Swarm cognition in honey bees. *Behavioral Ecology and Sociobiology* **62**:401-414.
11. Rittschof\*, C.C. and **T.D. Seeley**. 2008. The buzz-run: how honey bees signal 'Time to go!' *Animal Behaviour* **75**:189-197.
12. Rangel, J. and **T.D. Seeley**. 2008. The signals initiating the mass exodus of a honey bee swarm from its nest. *Animal Behaviour* **76**:1943-1952.
13. Schultz, K., K.M. Passino, and **T.D. Seeley**. 2008. The mechanism of flight guidance in honeybee swarms: subtle guides or streaker bees? *Journal of Experimental Biology* **211**:3287-3295.

14. **Seeley, T.D.** and P.K. Visscher. 2008. Sensory coding of nest-site value in honeybee swarms. *Journal of Experimental Biology* **211**:3691-3697.
15. **Ellis, J.C.**, M.J. Shulman, H. Jessop, R. Suomala, **S. Morris**, V. Seng, M. Wagner, and K. Mach. 2007. Impact of a few mammalian predators on breeding success in large colonies of Herring Gulls and Great Black-backed Gulls. *Waterbirds* **30**:375-383.
16. **Ellis, J.C.**, M.J. Shulman, M. Wood, J.D. Witman, and S. Lozyniak. 2007. Regulation of cross-ecosystem food webs by avian predators on New England rocky shores. *Ecology* **88**:853-863.
17. Visscher, P.K. and **T.D. Seeley**. 2007. Coordinating a group departure: who produces the piping signals on honeybee swarms? *Behavioral Ecology and Sociobiology* **61**:1615-1621.
18. Wood\*, C.L., **J.E. Byers**, K. Cottingham, I. Altman, M. Donahue, and A. Blakeslee. 2007. Parasites alter community structure. *Proceedings of the National Academy of Sciences* **104**:9335-9339.
19. Beekman, M., R.L. \*Fathke, and **T.D. Seeley**. 2006. How does an informed minority of scouts guide a honey bee swarm as it flies to its new home? *Animal Behaviour* **71**:161-171.
20. Carlson\*, R.L, M.J. Shulman, and **J.C. Ellis**. 2006. Factors contributing to spatial heterogeneity in the abundance of the common periwinkle *Littorina littorea* (L.) *Journal of Molluscan Studies* **72**:149-156. Shoals Marine Laboratory Contribution #124.
21. **Ellis, J.C.** and T.P. Good. 2006. Nest attributes, aggression, and breeding success of gulls in single and mixed-species subcolonies. *The Condor* **108**:211-219.
22. **Ellis, J.C.**, J.M. Fariña, and J.D. Witman. 2006. Nutrient transfer from sea to land: the case of gulls and cormorants in the Gulf of Maine. *Journal of Animal Ecology* **75**:565-574.
23. Fischer, E., **A. Pszenny**, W. Keene, J. Maben, A. Smith, A. Stohl, and **R. Talbot**. 2006. Nitric acid phase partitioning and cycling in the New England coastal atmosphere, *Journal of Geophysical Research* **111**, D23S09, doi:10. 1029/2006JD007328. Shoals Marine Laboratory Contribution #126.
24. **Morris, S.R.**, A. M. Larracunte, K.M. Covino\*, M.S. Mustillo, K.E. Mattern, D.A. Liebner, and H.D. Sheets. 2006. Utility of open population models: Limitations posed by parameter estimability in the study of migratory stopover. *Wilson Journal of Ornithology* **118**:513-526. Shoals Marine Laboratory Contribution #127.
25. Passino, K. and **T.D. Seeley**. 2006. Modeling and analysis of nest-site selection by honey bee swarms: the speed and accuracy trade-off. *Behavioral Ecology and Sociobiology* **59**:427-442.
26. **Seeley, T.D.**, P.K. Visscher, and K.M. Passino. 2006. Group decision making in honey bee swarms. *American Scientist* **94**:220-229.
27. **Ellis, J.C.**, W. Chen\*, B. O'Keefe\*, M.J. Shulman, and J.D. Witman. 2005. Gull predation on crabs in the rocky intertidal and shallow subtidal zones of coastal New England. *Journal of Experimental Marine Biology and Ecology* **324**:31-43. Shoals Marine Laboratory Contribution #120.
28. **Morris, S.R.**, D. A. Liebner, A.M. Larracunte, E.M. Escamilla, and H.D. Sheets. 2005. Multiple-day constancy as an alternative to pooling for estimating mark-recapture stopover

- length in Nearctic-Neotropical migrant landbirds. *Auk* **122**:319-328. Shoals Marine Laboratory Contribution #117.
29. **Morris, S.R.**, E. M. Turner, D. A. Liebner, A. M. Larracuente, and H. D. Sheets. 2005. Problems associated with pooling mark-recapture data prior to estimating stopover length for migratory passerines. Pages 673-679 in *Bird Conservation Implementation and Integration in the Americas: Proceedings of the Third International Partners in Flight Conference 2002* (C. J. Ralph and T. D. Rich, eds.). U.S.D.A. Forest Service, PSW-GTR-191, Albany, CA. Shoals Marine Laboratory Contribution #109.
  30. Sive, B.C., Y. Zhou, D. Troop, Y. Wang, W.C. Little, O.W. Wingenter, R.S. Russo, R.K. Varner, and **R. Talbot**. 2005. Development of a cryogen-free concentration system for measurements of volatile organic compounds. *Analytical Chemistry* **77**:6989-6998. Shoals Marine Laboratory Contribution #122.
  31. Stefaniak\*, L.M., J. McAtee, and M.J. Shulman. 2005. The costs of being bored: Effects of a clionid sponge on the gastropod *Littorina littorea*. *Journal of Experimental Marine Biology and Ecology* **327**:103-114. Shoals Marine Laboratory Contribution #121.
  32. Cully\*, S.M. and **T.D. Seeley**. 2004. Self-assemblage formation in a social insect: the protective curtain of a honey bee swarm. *Insectes Sociaux* **51**:317-324.
  33. Novak\*, M. 2004. Diurnal activity in a group of Gulf of Maine decapods. *Crustaceana* **77**:603-620. Shoals Marine Laboratory Contribution #118.
  34. Rome\*, M.S. and **J.C. Ellis**. 2004. Foraging ecology and interactions between Herring Gulls and Great Black-backed Gulls in New England. *Waterbirds* **27**:200-210. Shoals Marine Laboratory Contribution #119.
  35. **Seeley, T.D.** and P.K. Visscher. 2004. Group decision making in nest-site selection by honey bees. *Apidologie* **35**:1-16.
  36. **Seeley, T.D.** and P.K. Visscher. 2004. Quorum sensing during nest-site selection by honeybee swarms. *Behavioral Ecology and Sociobiology* **56**:594-601.
  37. Apprill\*, A.M. and M.P. Lesser. 2003. Effects of ultraviolet radiation on *Laminaria saccharina* in relation to depth and tidal height in the Gulf of Maine. *Marine Ecology Progress Series* **256**:75 – 85. Shoals Marine Laboratory Contribution #108.
  38. Byrnes\*, J. and J. Witman. 2003. Impact assessment of an invasive flatworm, *Convoluta convoluta*, in the southern Gulf of Maine. *Journal of Experimental Marine Biology and Ecology* **293**:173-191. Shoals Marine Laboratory Contribution #132.
  39. **Morris, S.R.**, A.J. Donovan, and S.M. Agugliaro. 2003. Accuracy of sex determination of hatch-year Common Yellowthroats (*Geothlypis trichas*) during the fall. *North American Bird Bander* **28**:105-110. Shoals Marine Laboratory Contribution #102.
  40. **Morris, S.R.**, C.R. Pusateri and K.A. Battaglia. 2003. Spring migration and stopover ecology of Common Yellowthroats (*Geothlypis trichas*) on Appledore Island, Maine. *Wilson Bulletin* **115**:64-72. Shoals Marine Laboratory Contribution #110.
  41. **Seeley, T.D.** and P.K. Visscher. 2003. Choosing a home: how the scouts in a honey bee swarm perceive the completion of their group decision making. *Behavioral Ecology and Sociobiology* **54**:511-520.

42. Britton, N.F., S.C. Pratt, N.R. Franks, and **T.D. Seeley**. 2002. Deciding on a new home: how do honey-bees agree? *Proceedings of the Royal Society of London* **B 269**:1383-1388.
43. Flescher, D. and F.H. Martini. 2002. Lampreys, Pages 16 – 19 in *Bigelow and Schroeder's Fishes of the Gulf of Maine*, third edition. (B.B. Collette and G. Klein-MacPhee, eds.) Smithsonian Institute Press, Washington, D. C.
44. Levin, P.S., **J.A. Coyer**, R. Petrik, and T.P. Good. 2002. Community-wide effects of non-indigenous species on temperate rocky reefs. *Ecology* **83**:3182-3193. Shoals Marine Laboratory Contribution #104.
45. Martini, F.H. and D. Flescher. 2002. Hagfishes, Pages 9 – 16 in *Bigelow and Schroeder's Fishes of the Gulf of Maine*, third edition. (B.B. Collette and G. Klein-MacPhee, eds.) Smithsonian Institute Press, Washington, D. C.
46. Wheeler, A.G., Jr. 2002. *Chilacis typhae* (Perrin) and *Holcocranum saturejiae* (Kolenati) (Hemiptera: Lygaeoidea: Artheneidae): Updated North American distributions of two palearctic cattail bugs. 2002. *Proceedings of the Entomological Society of Washington* **104**:24-32.
47. Gellin, C.E. and **S.R. Morris**. 2001. Patterns of movement during passerine migration on an island stopover site. *Northeastern Naturalist* **8**:253-266. Shoals Marine Laboratory Contribution #107.
48. **Morris, S.R.** and J. Glasgow. 2001. Spring and fall migration of American Redstarts on Appledore Island, Maine. *Wilson Bulletin* **113**:202-210. Shoals Marine Laboratory Contribution #106.
49. **Seeley, T.D.**, and S.C.\*Buhrman. 2001. Nest-site selection in honey bees: how well do swarms implement the “best-of-N” decision rule? *Behavioral Ecology and Sociobiology* **49**:416-427. Shoals Marine Laboratory Contribution #105.
50. **Morris, S.R.** and M.T. Bradley. 2000. Is tail feather shape a reliable indicator of age in warblers and thrushes? *North American Bird Bander* **25**:125-131. Shoals Marine Laboratory Contribution #102.
51. Rivest, B.R., **J.A. Coyer**, and S.T. Tyler. 2000. Large numbers of the European acoel (turbellarian) *Convoluta convoluta* in the Gulf of Maine. *Biological Invasions* **1**:393-394.
52. Coyer, J., D. Steller, and J. Witman. 1999. *The Underwater Catalog. A Guide to Methods in Underwater Research*. 2nd Ed. Shoals Marine Laboratory, Ithaca, NY. 150 pp.
53. Genovese, S.J and J.D. Witman 1999. Interactive effects of flow speed and particle concentration on growth rates of an active suspension feeder. *Limnology and Oceanography* **44**: 1120-1131. Shoals Marine Laboratory Contribution #101.
54. Rivest, B., **J.A. Coyer** and S. Tyler. 1999. The first known invasion of a free-living marine flatworm. *Biological Invasions* **1**:393-394. Shoals Marine Laboratory Contribution #100.
55. Weidenmiller, A. and **T.D. Seeley**. 1999. Imprecision in the waggle dances of honey bees for nearby food sources: Error or adaptation? *Behavioral Ecology and Sociobiology* **46**:190-199. Shoals Marine Laboratory Contribution #103.
56. Martini, F.H. 1998. The Ecology of Hagfishes, in *The Biology of Hagfishes*, J.M. Joergenson ed., Chapman and Hall, London. pp: 57-77.

57. Martini, F.H. 1998. Secrets of the Slime Hagfish. *Scientific American*. **228**:44-49. October 1998.
58. Martini, F.H., J.B. Heiser, and M.P. Lesser. 1998. A population profile for Atlantic Hagfish, *Myxine glutinosa* L., in the Gulf of Maine, part 2: Morphological variation in populations of *Myxine glutinosa* L. in the North Atlantic Ocean. *Fishery Bulletin* **96**:516-514.
59. Levin, P.S., W. Chiasson, and J.M. Green. 1997. Geographic differences in recruitment and population structure of a temperate reef fish. *Marine Ecology Progress Series* **161**:23-35.
60. Martini, F., J.B. Heiser, and M.P. Lesser. 1997. Ecology of the Hagfish, *Myxine glutinosa* L., in the Gulf of Maine II: Potential impact on benthic communities and commercial fisheries. *Journal of Experimental Marine Biology and Ecology* **214**:97-106.
61. Lesser, M.P., E.H. Martini, and J.B. Heiser. 1996. Ecology of the Hagfish, *Myxine glutinosa* L., in the Gulf of Maine I: Metabolic rates and energetics. *Journal of Experimental Marine Biology and Ecology* **208**:215-225.
62. Levin, P.S. 1996. Recruitment in a temperate demersal fish: Does larval supply matter? *Limnology and Oceanography* **41**:672-679.
63. Martini, F.H., J.B. Heiser, and M.P. Lesser. 1996. A population profile for Atlantic Hagfish, *Myxine glutinosa* L., in the Gulf of Maine, part 1: Morphometrics and reproductive state. *Fishery Bulletin* **95**:311-320.
64. Morris, S.R. 1996. Mass loss and probability of stopover by migrant warblers during spring and fall migration. *Journal of Field Ornithology* **67**:456-462.
65. Morris, S.R., D.W. Holmes, and M.E. Richmond. 1996. A ten-year study of the stopover patterns of migratory passerines during fall migration on Appledore Island, Maine. *Condor* **98**:395-409.
66. Smith, R.P., Jr., P.W. Rand, E. H. Lacombe, S.R. Morris, D.W. Holmes, and D.A. Caporale. 1996. Role of bird migration in the long distance dispersal of *Ixodes dammini*, the vector of lyme disease. *Journal of Infectious Diseases* **174**:221-224. Shoals Marine Laboratory Contribution # 133.
67. Levin, P.S. 1994. Small-scale recruitment variation in a temperate fish: the roles of macrophytes and food supply. *Environmental Biology of Fishes* **40**:271-281.
68. Levin, P.S. 1994. Fine-scale variation in recruitment of a temperate demersal fish: the importance of settlement versus post-settlement loss. *Oecologia* **97**:124-133.
69. Morris, S.R., M.E. Richmond, and D.W. Holmes. 1994. Patterns of stopover by warblers during spring and fall migration on Appledore Island, Maine. *Wilson Bulletin* **106**:703-718.
70. Factor, J.R., and B.L. Dexter. 1993. Suspension feeding in larval crabs (*Carcinus maenas*). *Journal of the Marine Biological Association, U.K.*, **73**:207-211.
71. Levin, P.S. 1993. Habitat structure, conspecific presence and spatial variation in the recruitment of a temperate reef fish. *Oecologia* **94**:176-185.
72. Witman, J.D., and K.P. Sebens. 1992. Regional variation in fish predation intensity: a historical perspective in the Gulf of Maine. *Oecologia* **90**:305-315.

73. Kingsbury, J.M. 1991. *Here's How We'll Do It: An Informal History of the Construction of the Shoals Marine Laboratory, Appledore Island, Maine*. Bullbrier Press, Ithaca, NY. 364 pp.
74. Levin, P.S. and A.C. Mathieson 1991. Variation in a host-epiphyte relationship along a wave exposure gradient. *Marine Ecology Progress Series* **77**:271-278.
75. Borror, A.C. and D.W. Holmes. 1990. *Breeding Birds of the Isles of Shoals*. 2<sup>nd</sup> edition. Shoals Marine Laboratory, Ithaca, NY. pp. 1-76
76. Witman, J.D. 1987. Subtidal coexistence: Storms, grazing, mutualism, and the zonation of kelps and mussels. *Ecological Monographs* **57**:167-187.
77. Seeley, R.H. 1986. Intense natural selection caused a rapid morphological transition in a living marine snail. *Proceedings of the National Academy of Sciences* **83**:6897-6901.
78. Witman, J.D. 1985. Refuges, biological disturbance, and rocky subtidal community structure in New England. *Ecological Monographs* **55**:421-445.
79. Seeley, T.D. 1983. Division of labor between scouts and recruits in honeybee foraging. *Behavioral Ecology and Sociobiology* **12**:253-259.
80. **Seeley, T.D.** 1982. How honeybees find a home. *Scientific American* **247**: 158-168.
81. **Seeley, T.D.**, R.A. Morse, and P.K Visscher. 1979. The natural history of the flight of honey bee swarms. *Psyche* **86**:103-113.
82. Gowen, A.G. and H.F. Mulligan. 1978. *A Photographic Guide to the Phytoplankton of the Coastal Waters, Gulf of Maine*. Shoals Marine Laboratory, Ithaca, NY. 164 pp.
83. **Seeley, T.D.** 1977. Measurement of nest cavity volume by the honey bee (*Apis mellifera*). *Behavioral Ecology and Sociobiology* **2**:201-227.
84. Boden, G.T. 1977. *The Vascular Flora of Appledore Island*. Shoals Marine Laboratory, Ithaca, NY. 46 pp.
85. Fowler-Billings, K. 1977. *Geology of the Isles of Shoals*. New Hampshire Department of Resources and Economic Development, Concord, NH. 47 pp.
86. Kingsbury, J.M. 1975. *Oil and Water. The New Hampshire Story*. Shoals Marine Laboratory, Ithaca, NY. 102 pp.

### **Honors Theses resulting from SML REU and RIFS research**

87. Brown, E. 2001. The role of food availability in determining the distribution and abundance of the sea star (*Asterias vulgaris*) and the green sea urchin (*Strongylocentrotus droebachiensis*). Honor's Thesis. Brown University.
88. Byrnes, J. 2001. The potential impact of an invasive acoel, *Convoluta convoluta*, in the Gulf of Maine. Honor's Thesis. Brown University.
89. Chen, W. 2001. Avian predation in the intertidal: Impact of the Great Black-backed Gull, *Larus marinus* (Linnaeus), on crab abundance. Honor's Thesis. Cornell University.
90. Kim, A. 2001. Encapsulation as protection from ultraviolet radiation for larval stages of the intertidal gastropod, *Nucella lapillus*. Honor's Thesis. Smith College.
91. Kraft, N. 2001. The role of decapod predation in limiting the lower distribution of the intertidal snail *Littorina littorea* in the Gulf of Maine. Honor's Thesis. Brown University.

### **Masters Theses & Ph.D. Dissertations**

92. Burbidge, S. 2008. (Antioch New England) Thesis. Master of Science. Nest-site Selection and Response to Habitat Manipulation by Roseate Terns (*Sterna dougallii*) on Seavey Island, New Hampshire.
93. Morris, S.R. 1996. (Cornell). Ph.D. Dissertation. The migration and stopover ecology of neotropical migrants on Appledore Island, Maine.
94. Morris, S.R. 1993. (Cornell). M.S. Thesis. Patterns of stopover migratory passerines on Appledore Island, Maine: An analyses of banding records from 1983-1991.
95. Lyman, E. G. 1988. (UNH). Thesis. Master of Science. A Comparison of Island and Mainland Populations of the Muskrat, *Ondatra zibethicus*.
96. Doherty, K. 1986. (UNH). Thesis, Master of Science. An evaluation of secondary wastewater treatment alternatives for saline domestic wastewater.
97. Hallows, L.J. Shoals Marine Laboratory, Appledore Island, Maine. 1986.
98. Montagnes, D. 1986. (UNH). The annual cycle of planktonic ciliates in the waters surrounding the Isles of Shoals, Gulf of Maine: Estimates of biomass and production.
99. McGill-Harelstad, P. A. 1985. (Cornell) Ph.D. Dissertation. Mechanisms and Consequences of Interspecific Interactions among Gulls. 113 pages.
100. Weeks, H.J. 1985. (Cornell). Ph.D. Dissertation. Ecology of the Three Spined Stickleback (*Gasterosteus aculeatus*): Reproduction in rocky tidepools.
101. Lewis, S.J. 1982. (Cornell) Ph.D. Dissertation. Effects of oil on avian productivity and population dynamics. 172 pages.
102. Boden, G.T. (UNH). 1977. Thesis, Master of Science. Some aspects of the ecology and growth of the brown seaweeds (*Laminaria* spp., *Agarum* spp., and *Alaria* spp.) in the Southern Gulf of Maine.
103. McGill, P.A. 1977. (Cornell) M.S. thesis. Breeding Ecology and Competition between Great Black-backed and Herring Gulls. 88 pages.

104. Kinner, Nancy 1976l (UNH). Thesis, Master of Science. An evaluation of the treatment of saline domestic wastewater using rotating biological contactor.
105. Morris, R.F. 1975. PhD dissertation. Product development and nutritional evaluation of underutilized species of sharks.