

**PRESENT ADDRESS**

U.W. Friday Harbor Laboratories, 620 University Rd., Friday Harbor, WA 98250  
and Department of Biology, University of Washington, Seattle WA 98195  
phone: 206 616 0764 fax: 206 543 1273 email: sebens@uw.edu

**EDUCATION**

B. A. with Honors, Biology, 1972, University of Connecticut, Storrs, CT  
Ph.D., Zoology, 1977, University of Washington, Seattle, WA

**ACADEMIC POSITIONS**

Assistant Professor, Department of Organismal and Evolutionary Biology,  
Harvard University (1977 - 1982), Associate Professor, (1982 - 1985)  
Assistant Curator of Invertebrates, Mus. Comparative Zoology, Harvard (1979 - 1982)  
Associate Curator, MCZ, Harvard (1982 - 1985), Research Associate (1985 - present)  
Associate Professor of Biology, Northeastern University (1985 - 1986)  
Director, Marine Science Center, Northeastern University (1985 - 1991)  
Professor of Biology, Northeastern University (1986 - 1992)  
Associate Dean of Arts and Sciences, Northeastern Univ. (Acting, 1986 - 1987)  
Adjunct Faculty, Northeastern University (1992 - present)  
Adjunct Faculty, U.M. System, Center for Environmental Science, Horn Pt. Environmental  
Labs (1993 - 1994, 1997 - 2004), Professor (1994 - 1997)  
Director, Marine-Estuarine-Environmental Sciences Graduate Program,  
University of Maryland System (1991 - 1997)  
Professor, Zoology/Biology, University of Maryland (1991 - 2005)  
Adjunct Faculty, University of Rhode Island (1999 - 2005)  
Professor, Biology, University of Massachusetts Boston (2003 - 2005)  
Dean, College of Science and Mathematics, UMass Boston (2003 - 2005)  
Professor, Department of Biology, University of Washington, Seattle (2005 - present)  
Professor, School of Aquatic and Fisheries Sciences, UW, Seattle (2010 - present)  
Director, UW Friday Harbor Laboratories, Friday Harbor, WA (2005 - present)

**HONORS RECEIVED**

B. A. with Honors, Honors Program, University of Connecticut, 1972  
Mercer Award, Ecological Society of America, 1983 for "Outstanding  
Ecological Paper, 1982"  
Fellow, American Association for the Advancement of Science, 1986  
Phi Kappa Phi, Faculty Membership, 1987  
Fulbright Senior Scholar, Award for 1998 - 1999

**PROFESSIONAL SOCIETIES**

American Society for Limnology and Oceanography  
The Oceanographic Society, A.A.A.S., Sigma Xi  
Ecological Society of America, Society for Integrative and Comparative Biology  
International Society for Reef Studies

## **ADVISORY AND EDITORIAL POSITIONS**

Aquatic Ecosystems Panel of A.A.A.S./National Park Service- project on Methods for Environmental Studies (1981 - 1982)  
Marine Science Fund Advisory Board, Friday Harbor Laboratories, U.W. (1976 - 1983)  
Board of Directors, Organization for Tropical Studies (1981 - 1985), Board of Editors, Journal of Exp. Mar. Biol. Ecol. (1984 - 1989)  
Board of Directors, Mass. Bay Marine Studies Consortium (1985 - 1990)  
Panel Member, National Science Found., Biological Research Resources (1986)  
Scientific Review Committee, Harbor Branch Oceanographic Inst. (1985)  
Citizens Advisory Committee, S. Essex Sew. Div., Salem, MA (1986 - 1987)  
Technical Advisory Group, Mass. Exec. Off. Environmental Affairs (1987 - 1989)  
Mass. Bay Program, Technical Advisory Committee. (1988 - 1989)  
Boston Harbor/Mass. Bay Univ. Research Consortium, member (1987 - 1989)  
Mass. Audubon Resources for the North Shore, Coastal Monitoring Program Advisory Committee (1987 - 1990)  
American Society of Zoologists, Centennial Committee, Nominating Committee, Centennial Local Committee (Chairperson) (1986 - 1989)  
Ecological Society of America, Awards Committee, (1984 - 1989)  
Editor, Marine Flora and Fauna of the Northeastern United States, N.O.A.A. Tech. Repts. Ed. Board, Assoc. Coordinator.(1988 - 1997), Editor (1997 - present)  
National Science Foundation Review Panel, Biological Oceanography (October 1989, July 1993, 1999)  
National Science Foundation Review Panel, LTER (December 1997)  
International Society for Reef Studies, Gov. Board Member, (1992 – 1997)  
Visiting Committee, external review, Smithsonian Envir. Research Center (1997)  
Pew Fellows Program, Nominating Committee (1997 – 1998)  
New England COSEE Advisory Committee (2004-2005)  
Marine Resources Committee, San Juan County WA (2005-present), Chair: Science Subcommittee (2007-present)  
SeaDoc Society, Science Advisory Committee (2005 - present)  
National Science Foundation Site Review, LTER (2006, 2008)  
NAML (Natl. Association of Marine Laboratories), Board Member (2006 - present)  
WAML (Western Assoc. of Marine Laboratories), President Elect (2007 -2009), President (2009-2011)  
Marine Protected Areas Work Group, WA State, Olympia WA, 2008-2010  
SICB (Soc. for Integrative and Comparative Biology), President-Elect (2009-2011), President (2011-2013)

## PUBLICATIONS:

- Sebens, K. P. 1976. A vital stain technique for individually marking soft-bodied intertidal invertebrates; a test on the sea anemone *Anthopleura xanthogrammica* J. Fish Res. Bd. Can. 33: 1407 - 1410.
- Sebens, K. P. 1976. The ecology of sea anemones in Caribbean Panama; utilization of space on a coral reef. In: Coelenterate Ecology and Behavior, G. Mackie, ed., Plenum, Chicago. 67 - 77.
- Sebens, K. P. and K. DeRiemer. 1977. Diel cycles of expansion and contraction behavior in coral reef anthozoans. Marine Biology 43: 247 - 256.
- Sebens, K. P. 1977. Autotrophic and heterotrophic nutrition of coral reef zoanths. Proceedings of the Third International Coral Reef Symposium, Miami, Florida. I. 397 - 404.
- Sebens, K. P. and G. Laakso. 1977. The genus *Tealia* (Anthozoa: Actiniaria) in the San Juan Archipelago and the coast of the Olympic Peninsula, Washington, with descriptions of *Tealia piscivora* sp. nov and *Tealia lofotensis* (Danielssen). Wasmann J. Biology 35: 152 - 168.
- Sebens, K. P. and R. T. Paine. 1978. Biogeography of anthozoans along the west coast of South America: habitat, disturbance and prey availability. In: Proceedings of the Int. Symposium on Marine Biogeography and Ecology in the Southern Hemisphere. Vol. I., N. Zealand Dept. of Scientific and Industrial Res. Inf. Ser. No. 137, 745 pp., 219 - 237.
- Sebens, K. P. 1979. The energetics of asexual reproduction and colony formation in benthic marine invertebrates. Amer. Zool. 19: 683 - 697.
- Sebens, K. P. 1980. The regulation of asexual reproduction and body size in the sea anemone *Anthopleura elegantissima* (Brandt). Biol. Bull. 158: 370 - 382.
- Sebens, K. P. 1981. Recruitment in a sea anemone population: larval substrate becomes adult prey. Science 213: 785 - 787.
- Sebens, K. P. 1981. The allometry of feeding, energetics, and body size in three sea anemone species. Biol. Bull. 161: 152 - 171.
- Sebens, K. P. 1981. The reproductive ecology of two species of intertidal sea anemones, *Anthopleura xanthogrammica* (Brandt) and *A. elegantissima*. (Brandt). J. Exp. Mar. Biol. Ecol. 54: 225 - 250.
- Sebens, K. P. 1981. Recruitment and habitat selection in the intertidal sea anemones, *Anthopleura elegantissima* (Brandt) and *A. xanthogrammica* (Brandt). J. Exp. Mar. Biol. Ecol. 59: 1 - 22.
- Sebens, K. P. 1982. The limits to indeterminate growth: an optimal size model applied to passive suspension feeders. Ecology 63: 209 - 222 (Mercer Award, ESA 1983).
- Sebens, K. P. 1982. Intertidal distribution of zoanths on the Caribbean coast of Panama: effects of predation and desiccation. Bull. Mar. Sci. 32: 316 - 335.
- Sebens, K. P. 1982. Asexual reproduction in *Anthopleura elegantissima* (Brandt) (Anthozoa; Actiniaria): seasonality and spatial extent of clones. Ecology 63: 434 - 444.
- Sebens, K. P. 1982. Competition for space: prey availability and escape in size. Am. Natur. 120: 189-197
- Sebens, K. P. 1983. Larval and juvenile ecology of the temperate octocoral *Alcyonium siderium* Verrill. I: substrate selection by planula larvae. J. Exp. Mar. Biol. Ecol. 71: 73 - 89.
- Sebens, K. P. 1983. Settlement and metamorphosis of a temperate soft-coral larva (*Alcyonium siderium* Verrill): induction by crustose algae. Biol. Bull. 165: 286 - 304..
- Sebens, K. P. 1983. The larval and juvenile ecology of the temperate octocoral *Alcyonium siderium* Verrill. II: fecundity, survivorship, and juvenile growth. J. Exp. Mar. Biol. Ecol. 72: 263 - 285
- Sebens, K. P., with P. Rogers, L. R. Beard, K. D. Frederick and O. T. Lind. 1983. Chapter II. Aquatic Ecosystems. In: Natural Resource Inventories and Baseline Studies: Methods for Developing Countries. AAAS and Nat. Park Service Publication, AAAS Office of International Science, 193 pp. (pages by K. Sebens: 50 - 57, 61 - 69, 72075 90 - 100, 114 - 130, 149, 151 - 157).
- Sebens, K.P. 1983. Population dynamics and habitat suitability in the intertidal sea anemones *Anthopleura xanthogrammica* (Brandt) and *A. elegantissima* (Brandt). Ecol. Monogr. 53: 405 - 433.
- Smith, D. S. and K. P. Sebens. 1983. The physiological ecology of growth and reproduction in *Onchidoris aspera* (Gastropoda: Nudibranchia). J. Exp. Mar. Biol. Ecol. 72: 287 - 304.
- Sebens, K. P. 1984. Morphological variability during longitudinal fission of the sea anemone *Anthopleura elegantissima*. Pacific Science 37: 121 - 133.
- Fadlallah, Y. H., R. H. Karlson, and K. P. Sebens. 1984. A comparative study of sexual reproduction in three species of Panamanian zoanths (Coelenterata: Anthozoa). Bull. Mar. Sci. 35: 80 - 89.
- Sebens, K. P. and M. A. R. Koehl. 1984. The feeding ecology of two subtidal rock wall zooplanktivores, *Alcyonium siderium* and *Metridium senile*. Marine Biology 81: 255 - 274.
- Sebens, K. P. 1984. Growth rate and size structure in populations of colonial and solitary invertebrates. Symp. Series for Underwater Res., The Ecology of Deep and Shallow Reefs, N.O.A.A., 2: 9 - 15.
- Sebens, K. P. 1984. Water flow determines colony size in a temperate octocoral. Proc. Natl. Acad. Sci. 81: 5473 - 5477.

- Sebens, K. P. 1984. Agonistic behavior in a large solitary sea anemone, *Anthopleura xanthogrammica* (Brandt). *Biol. Bull.* 166: 457 - 472.
- Sebens, K. P. 1985. Community ecology of vertical rock walls in the Gulf of Maine sublittoral zone: small - scale processes and alternative community states. Chapter 23. In: P. G. Moore and R. Seed, eds. *The Ecology of Rocky Coasts*. Hodder and Stoughton Educational, Kent. pp. 346 - 371.
- Sebens, K. P. and J. R. Lewis. 1985. Rare events and population structure of the barnacle *Semibalanus cariosus*. *J. Exp. Mar. Biol. Ecol.* 87: 55 - 65.
- Sebens, K. P. and B. L. Thorne. 1985. The relationships among asexual reproduction, clone diversity and disturbance rate. *Proc. of the Symposium on Population Biology and Evolution of Clonal Organisms* (1982). Yale University Press, New Haven.
- Sebens, K. P. 1985. The ecology of New England rocky subtidal communities. *American Scientist* 73: 548 - 557.
- Sebens, K. P. 1986. Spatial relationships among encrusting marine organisms in the New England subtidal. *Ecol. Monogr.* 56: 73 - 96.
- Sebens, K. P. 1987. Applications of unmanned submersibles to benthic marine ecological research. in: *Undersea Teleoperators and intelligent Autonomous Undersea Vehicles*. Proceedings. N.O.A.A./M.I.T. Seagrant Publication pp. 83 - 100.
- Sebens, K. P. 1987. Chapter 4: Coelenterate Energetics. 1987. In: T. J. Pandian and F. J. Vernberg, eds. *Animal Energetics*. Academic Press, New York. pp 55 - 120.
- Sebens, K.P. 1987. The ecology of indeterminate growth in animals. *Annual Review of Ecology and Systematics*, 18: 371 - 407
- Sebens, K. P. 1988. Competition for space: the effects of disturbance and indeterminate competitive success. *Theor. Pop. Biol.* 953: 430 - 441.
- Briscoe, C. S. and K. P. Sebens. 1988. Omnivory in the green sea urchin *Strongylocentrotus droebachiensis* (Müller) predation on subtidal mussels. *J. Exp. Mar. Biol. Ecol.* 115: 1 - 24.
- Sebens, K.P., J.D. Witman, R.A. Allmon and E.J. Maney, Jr. 1988. Early community development experiments in rocky subtidal habitats (Gulf of Maine, 30 - 80 m). pp. 45 - 66. In: I. Babb and M. DeLuca, eds. *Benthic Productivity and Marine Resources in the Gulf of Maine*. N.U.R.P. (N.O.A.A.) Research Report 88 - 3.
- Allmon, R. A. and K. P. Sebens. 1988. Feeding and ecological impact of an introduced nudibranch, *Tritonia plebeia*, New England, USA. *Marine Biology* 99: 375 - 385.
- Witman, J.D. and K.P. Sebens. 1988. Benthic community structure at a subtidal rock pinnacle in the central Gulf of Maine. pp. 67 - 106. In: I. Babb and M. DeLuca, eds. *Benthic Productivity and Marine Resources in the Gulf of Maine*. N.U.R.P. (N.O.A.A.) Research Report 88 - 3.
- Sebens, K. P. and J. S. Miles. 1988. Sweeper tentacles in a gorgonian octocoral: their function in competition for space. *Biol. Bull.* 175: 378 - 387.
- Witman, J. D. and K. Sebens. 1989. Distribution and ecology of sponges at a subtidal rock ledge in the central Gulf of Maine, U.S.A. in: K. Reutzler, (ed.) *Proc. of the Symposium on Sponge Biology*, October 1985 Woods Hole, MA. Smithsonian Inst. Press. pp. 391 - 396
- Patterson, M. R. and K. P. Sebens. 1989. Forced convection modulates gas exchange in cnidarians *PNAS* 86:8833 - 8836.
- Sebens, K. P. 1990. Habitat structure and community dynamics in marine benthic systems. In: E. D. McCoy, S. A. Bell and H. Mushinsky, eds. *Habitat Structure: the Physical Arrangement of Objects in Space*. Chapman and Hall, London pp 211 - 234
- Sebens, K.P. and A.S. Johnson. 1991. The effects of water movement on prey capture by reef corals. *Hydrobiologia* 226:91 - 101.
- Sebens, K.P. and A.S. Johnson. 1991. Effects of water movement on prey capture and distribution of reef corals - synopsis. R.B. Williams, P.F.S. Cornelius, R.G. Hughes and E.A. Robson (eds), *Coelenterate Biology: Recent Research on Cnidaria and Ctenophora*. 1991 Kluwer Academic Publishers. Belgium. *Hydrobiologia* 216/217: 247 - 248.
- Patterson, M.R., K.P. Sebens, and R.R. Olson. 1991. *In situ* measurements of forced convection on primary production and dark respiration in reef corals. *Limnol. Oceanogr.* 36:936 - 948.
- Maney, E.J., J. Ayers, K.P. Sebens and J.D. Witman. 1991. Quantitative techniques for underwater video photography. In L.B. Cahoon, ed. *Diving for Science*. 1991. Proc. of the Amer. Acad. Underwater Sciences, 11th Ann. Symp., Wilmington, N.C.
- 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.
- Sebens, K.P. and E.J. Maney Jr. 1992. A portable diver-operated plankton sampler for near-substratum use. In L.B. Cahoon, ed. *Diving for Science*. 1992. Proc. of the Amer. Acad. Underwater Sciences, 12th Ann. Symp., Wilmington, N.C.

- Helmuth, B.S.T. and K. P. Sebens 1993. The influence of colony morphology and orientation to flow on particle capture by the scleractinian coral *Agaricia agaricites* (Linnaeus). J. Exp. Mar. Biol. Ecol. 165:251 - 278.
- Johnson, A.S. and K. P. Sebens. 1993. Consequences of a flattened morphology: effects of flow on feeding rates of the scleractinian coral *Meandrina meandrites*. Mar. Ecol. Prog. Ser. 99:99 - 114.
- Sebens, K.P. 1994. Biodiversity of Coral Reefs: What are We Losing and Why? Amer. Zool. 34:115 - 133.
- Aronson, R.B., J. P. Ebersole and K. P. Sebens. 1994. Hurricane Hugo's impact on Salt River submarine Canyon, St. Croix, U.S. Virgin Islands. In, Ginsburg, W. 1994. ed. Pp. 189 - 195. Proc. Coll. on Global Aspects of Coral Reefs: Health Hazards, and History, 1993. Univ. of Miami, FL
- Sebens, K.P. and T. J. Done. 1994. Water flow, growth form and distribution of scleractinian corals: Davies Reef (GBR), Australia. Proc. 7th Int. Coral Reef Symposium, Guam, 1992. Vol 1:557 - 568.
- Lesser, M., K. Sebens and J. Witman. 1994. Effects of flow and seston availability on scope for growth of benthic suspension feeding invertebrates from the Gulf of Maine. Biol. Bull. 187:319 - 335
- Durante, K.M. and K. P. Sebens. 1994. Reproductive ecology of the ascidians *Molgula citrina* Alder and Hancock, 1848 and *Aplidium glabrum* (Verrill, 1871) from the Gulf of Maine. Ophelia 39:1- 21.
- Sebens, K.P. 1995. In: H. A. Mooney et al. Ch. 6.1.10. Biodiversity and Ecosystem Functioning: Ecosystem Analyses: Coral Reefs (contributor, multiauthored). pp. 381 - 387. In Global Biodiversity Assessment, V. H. Heywood, ed. Publ. for United Nations Environ. Programme. Cambridge Univ. Press. 1140 pp.
- Graham, K. and K. P. Sebens. 1996 Distribution of marine invertebrate larvae near vertical surfaces in the rocky subtidal zone. Ecology 77:933 - 949
- Sebens, K.P., J. Witting and B. Helmuth. 1996. Effects of water flow and aggregation on particle capture by the reef coral *Madracis mirabilis*. J. Exp. Mar. Biol. Ecol. 211:1 - 28.
- Sebens, K. P. , K. Vandersall, L. Savina and K. Graham. 1996. Zooplankton capture by two scleractinian corals, *Madracis mirabilis* and *Montastrea cavernosa*, in a field enclosure. Marine Biology 127:303 - 318.
- Sebens, K. P. 1997. Adaptive responses to water flow: Morphology, energetics, and distribution of reef corals. Proc. 8th Int. Coral Reef Symposium, Panama City, 1996. Vol 2. 1053 - 1058.
- Heidelberg, K. B., K. P. Sebens, and J. E. Purcell. 1997. Effects of prey escape behavior and water flow on prey capture by the scleractinian coral, *Meandrina meandrites*. Proc. 8th Int. Coral Reef Symp. Panama City, 1996. 2:1081 - 1086.
- Helmuth, B. S. T, K. P. Sebens, and T. L. Daniel. 1997. Morphological variation in coral aggregations: branch spacing and mass flux to coral tissues. J. Exp. Mar. Biol. Ecol. 209:233 - 259
- Mills, M. M. and K. P. Sebens. 1997. Particle ingestion efficiency of the corals *Siderastrea siderea* and *Agaricia agaricites*: Effects of flow speed and sediment loads. Proc. 8th Int. Coral Reef Symposium, Panama City, 1996 Vol. 2:1059 - 1064.
- Sebens, K.P., E.J. Maney Jr., and A. Gordon. 1997. Long-term research in the rocky subtidal zone (Massachusetts, 1977 - 1997). Proc. American Academy of Underwater Sciences. pp. 141 - 159.
- Helmuth, B.S.T, B.H. Timmerman and K.P. Sebens. 1998. The interplay of host morphology and symbiont microhabitat in coral aggregations. Mar. Biol. 130:1 - 10.
- Sebens, K.P., S. Grace, B. Helmuth, E. Maney and J. Miles. 1998. Water flow and prey capture by three scleractinian corals, *Madracis mirabilis*, *Montastrea cavernosa* and *Porites porites* in a field enclosure. Marine Biology 131:347 - 360.
- Sebens, K. P. 1998. Marine flora and fauna of the Eastern United States. Anthozoa: Actiniaria, Corallimorpharia, Ceriantharia and Zoanthidea. N.O.A.A. Technical Rpt. NMFS. 141. 68 pp.
- Shyka, T. and K.P. Sebens. 2000. Community structure, water column nutrients and water flow in two Pelican Cays Ponds, Belize. Atoll Research Bulletin 471:106 - 121.
- Sebens, K. P. 2002. Energetic constraints, size gradients and size limits in benthic marine invertebrates. Integ. and Comp. Biol. 42:853-861.
- Sebens, K.P., B. Helmuth, E. Carrington and B. Agius. 2003. Effects of water flow on growth and energetics of the scleractinian coral *Agaricia tenuifolia*, in Belize. Coral Reefs 22:35-47.. zooplankton on a Jamaican fore-reef. Coral Reefs 23:263-280.
- Ferrier-Pagès, J. Witting, E. Tambutté and K. P. Sebens. 2003. Effect of natural zooplankton feeding on the tissue and skeletal growth of the scleractinian coral *Stylophora pistillata*. Coral Reefs 22:229-240.
- Heidelberg, K. , J. Purcell and K.P. Sebens. 2003. Composition and sources of near reef zooplankton on a Jamaican fore-reef. Coral Reefs 23:263-280.

- Mills, M. M., F. Lipschultz and K. P. Sebens. 2004. Particulate matter ingestion and associated uptake by four species of scleractinian corals. *Coral Reefs* 23:311-324.
- Mills, M.M., and K. P. Sebens. 2005. Ingestion and assimilation of nitrogen from benthic sediments by three species of corals. *Marine Biology* 145:1097-1106.
- Badgley, B.D., F. Lipschultz and K. P. Sebens. 2006. Nitrate uptake by the reef coral *Diploria strigosa* : effects of concentration, water flow, and irradiance. *Marine Biology* 149:229-238.
- Jenkins, S, Sebens, K.P. et al. 2008. Comparisons of the ecology of shores across the North Atlantic: do differences in players matter for process? *Ecology* 89(11): S3-S23
- Satterlie, R.A., J. S. Pearse and K.P. Sebens. 2009. The black box, the creature from the Black Lagoon, August Krogh, and the dominant animal. *Integr. Comp. Biol.* 49 (2) 1-4.
- Heidelberg, K.B., K. L. O'Neil, J.C. Bythell and K.P. Sebens. 2010. Vertical distribution and diel patterns of zooplankton abundance and biomass at Conch Reef, Florida Keys (USA). *Journal of Plankton Research* 32:75-91.
- Sebens, K.P. Editor. 2011. San Juan County Marine Stewardship Area, Monitoring Plan. Marine Resources Committee, San Juan County. 90 pp.
- Van Cleve, FB, G Bargmann, M Culver, and the MPA Work Group. 2009. Marine Protected Areas in Washington: Recommendations of the Marine Protected Areas Work Group to the Washington State Legislature. Washington Department of Fish and Wildlife, Olympia, WA. (MPA work group: K. Sebens et al.)

#### **MANUSCRIPTS IN PREPARATION (2011):**

- Lipschultz, F., T. Shyka and K.P. Sebens. The effect of flow on uptake of ammonium at nanomolar concentrations by the coral *Madracis mirabilis*. *Mar. Ecol. Prog. Ser.* (manuscript subm.)
- Witting, J. and K. P. Sebens. The role of zooplankton capture in six Caribbean scleractinian corals: in situ evidence that heterotrophy enhances calcification and tissue growth rate. *Marine Biology* (manuscript. subm.)
- Sebens, K. P. and R. Aiello. Population dynamics of the temperate zone octocoral *Alcyonium siderium*: site-specific effects of predation, competition and water flow. Ms in prep for *Ecol. Monogr.*
- Sebens, K. P., B. Agius, A. Gordon, et al. Long-term stability of algal-urchin dominated communities on horizontal surfaces in Massachusetts Bay (1978 -1998). Manuscript in prep. for *Ecol. Monogr.*
- Lipschultz, F., K. P. Sebens and B. Kinetics of Nutrient Uptake in Corals: bridging the gap between biology and engineering. Manuscript in prep. for *Limnol. Oceanogr.*
- Sebens, K. P., G. Goodbody, A. Gordon, and M. Chen. Population dynamics of the sea urchin *Strongylocentrotus droebachiensis* in the shallow subtidal zone, Massachusetts Bay (1978 -1998).
- Sebens, K. P., B. Agius, A. Gordon, and R. Sleboda. Long-term community dynamics on vertical rock surfaces in the subtidal zone, Massachusetts Bay (1978 -1998). Manuscript

#### **PUBLICATIONS IN THE POPULAR LITERATURE**

- Sebens, 1979. Underwater photographs. In: D. McLachlan and J. Ayres, *Fieldbook of Pacific Northwest Sea Creatures*. Naturegraph Publishers, Calif. 208 pp.
- Sebens, K.P. 1981. Underwater Photographs. In: N. A. Meinkoth. *The Audubon Society Field Guide to North American Seashore Creatures*. Chanticleer Press, New York, 800 pp.
- Sebens, K. P. 1986. The anemone below: colorful contenders battle for territory amidst tidal rock and reef. *Natural History* 95: 48 - 55. (included color photographs by K. Sebens)
- Sebens, K.P. 1990. Illustrations and equipment description. pp 26,45,46. In: J. Coyer and J. Witman, *The Underwater Catalog: A Guide to Methods in Underwater Research*. Shoals Marine Laboratory/N.Y. Sea Grant Program. 72 pp.
- Sebens, K.P. 1997. Zooplankton capture by reef corals: corals are not plants! *Reef Encounter*, Newsletter of the Int. Society for Reef Studies. 21:10 - 15.
- Sebens, K.P. 1997. A shoal of American shad (photograph). In: Mann et al. 1997. A clupeid fish can detect ultrasound. *Nature* 389:341

## ABSTRACTS

- Koehl, M. A. R. and K. P. Sebens. 1982. Small scale spatial and temporal differences in the zooplankton available to and captured by benthic suspension feeders. Am. Soc. Limnol. Oceanogr. Proceedings (June, 1982).
- Koehl, M. A. R. and K. P. Sebens. 1986. Can the food microhabitats of benthic suspension feeders be different from each other? Western Soc. of Naturalists, Abstract. p.
- Witman, J. D. and K. P. Sebens. 1987. Colonization of hard substrata in deep subtidal habitats of the Gulf of Maine. Amer. Zool. 27 - 165.
- Witman, J.D. and K.P. Sebens. 1988. Patch dynamics in deep rocky subtidal communities. Amer. Zool. 28 (4): 69.
- Witman, J. D. and K. P. Sebens. 1989. Fish predation pressure at subtidal rock ledges in the Gulf of Maine: onshore-offshore differences. Benthic Ecology Meetings, Abstracts. p.
- Sebens, K.P. 1988. Population dynamics of a temperate zone octocoral: long term studies. Amer. Zool. 28 (4):
- Sebens, K.P. 1989. Water movement and prey capture by corals. Amer. Zool. 29(5):144A.
- Durante, K.M. and K.P. Sebens. 1990. Fecundity of subtidal ascidians: a comparison of solitary and colonial life history strategies. Can. Soc. Zoologists., Burnaby, B.C., Canada. Abst.
- Sebens, K.P. 1991. Effects of water flow on coral growth and prey capture. Amer. Zool. 31(5): 59A.
- Sebens, K.P. 1991. Near-bottom water flow patterns at Discovery Bay, Jamaica, and effects on coral ecology. Reefs Beyond the Golden Gate. Int. Soc. Reef Studies Annual Mtg., Berkeley, CA
- Sebens, K.P. 1992. Suspension feeding by corals and their relatives; morphology and ecology. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg. Santa Fe, N.M., Abst. p. 144.
- Sebens, K.P. 1993. Historical modification of the Gulf of Maine, a semi-enclosed coastal sea. Envir. Management of Enclosed Coastal Seas. Baltimore, MD. Abstract
- Sebens, K.P. 1994. Larval dispersal and community structure in rocky subtidal habitats. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA. Abstract.
- Done, T., Sebens, K.P. and W. Wiebe. 1994. Biodiversity of coral reefs. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA. Abstract..
- Sebens, K.P. 1996. Spatial pattern in coral communities: effects of water flow on multiple scales. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA. Abstract.
- Heidelberg, K.B., K.P. Sebens and J.E. Purcell. 1995. Flow effects on zooplankton escape behaviors from a scleractinian coral. Proc. Symp Zooplankton Behav. Phys.
- Done, T., Sebens, K.P. and W. Wiebe. 1994. Biodiversity of coral reefs. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.
- Sebens, K.P. 1996. Effects of water flow on zooplankton capture and energetics of reef corals. p. 84 in: The Ecosystem of the Gulf of Aqaba in relation to the enhanced economical development and the peace process III. Interuniversity Inst. for Marine Science in Eilat.
- Shyka, T.A., K. P. Sebens and B. Helmuth. 1996. The effect of flow and nutrients on the growth rate of a common coral *Agaricia tenuifolia* and reef community structure at two Belize cays. Proc. 8th Int. Coral Reef Symposium, Panama City, 1996.
- Sebens, K.P. 1996. Spatial pattern in coral communities: effects of water flow on multiple scales. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.
- Mills, M.M., F. Lipschultz and K. P. Sebens 1998. Corals feeding on sediments? Particle ingestion efficiencies and possible contributions to coral nutrition. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.
- Heidelberg, K., J.E. Purcell and K. P. Sebens 1998. A model of coral heterotrophy based on prey behavior, coral morphology and water flow. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.
- Heidelberg, K., K. P. Sebens and J.E. Purcell 1999. Zooplankton escape from coral predators. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM. Abstracts.p. 82
- Helmuth, B.S.T. and K. P. Sebens. 1999. When does morphology matter? Biomechanical approaches to studying the physiological ecology of corals. NCEAS Workshop: Modelling Growth and Form in Sessile Marine Organisms.
- Sebens, K.P. 1999. Marine bioinvasions in the rocky subtidal zone (MA 1977 - 1998). Marine Bioinvasions: Proc. First National Conference, M.I.T., Cambridge, MA p. 122.
- Helmuth, B. and K.P. Sebens. 1999. When does morphology matter? Biomechanical approaches to studying the physiology of corals. In: Modelling Growth and Form of Sessile Marine Organisms Working Group. Nat. Center for Ecological Analysis and Synthesis. UCSB, Santa Barbara, CA
- Mills, M.M., F. Lipschultz and K. P. Sebens. 2000. Uptake of suspended and deposited material

- associated nitrogen by scleractinian corals. 9<sup>th</sup> Int. Coral Reef Symposium, Bali. Abstracts. A10.23
- Sebens, K.P., J. Witting and C. Ferrier-Pagès. 2001. Zooplankton capture by corals: effects on tissue and skeletal growth. Am. Soc. of Limnology and Oceanography. Abstracts. CS11 - 3.
- Heidelberg, K.B. and K.P. Sebens. 2001. Temporal patterns, abundance, and composition of near reef zooplankton on a Jamaican coral forereef. . Am. Soc. of Limnology and Oceanography. Abstracts. CS37 - 20.
- Agius, B. and K. P. Sebens. 2001. Community ecology of rocky shores: long-term research in the subtidal zone (1978 - 2001) . Am. Soc. of Limnology and Oceanography. Abstracts. SS40 - 18.
- Sebens, K.P., J. Witting and C. Ferrier-Pagès. 2001. Zooplankton capture by reef corals enhances tissue and skeletal growth. 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham N. Hampshire. Abstracts. p. 151
- Agius, B.P. and K. P. Sebens 2001. Multidecadal community ecology: research in the rocky subtidal zone of Massachusetts (1978 - 2000). 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham, N. Hampshire. Abstracts. p.28
- Badgley, B.D., F. Lipschultz, and K. P. Sebens. 2001. Nitrate uptake by a Bermudian scleractinian Coral, *Diploria strigosa*, under realistic environmental conditions. 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham, N. Hampshire. Abstracts. p.33
- Geraldi, N.R. and K. P. Sebens. 2001. Rocky subtidal community ecology: comparison of photographic and video sampling of benthic surfaces. 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham, N. Hampshire. Abstracts. p.211
- Sebens, K.P. 2001. Long term population dynamics of nudibranch mollusks in New England. World Congress of Malacology. Vienna, Austria, Abstracts.
- Sebens, K.P. 2002. Size gradients in intertidal and subtidal marine invertebrates: the role of energetic and mechanical limits. SICB, Anaheim, CA, Abstracts.
- Sebens, K.P. 2002. Water flow , growth and energetics of corals in Belize Benthic Ecology Meeting Orlando, FL, Abstracts.
- Sebens, K.P. 2003. . Location, allocation, translocation: determinants of growth rate in corals. SICB, Toronto, Canada SICB, Abstracts.
- Sebens, K.P. 2003. Benthic Environmental factors limiting tissue and skeletal growth in reef corals. Benthic Ecology Meetings, Groton, CT, Abstracts.
- Goodbody, G. and Sebens, K.P. 2003. Sea urchin demography, Benthic Ecology Meetings, Groton, CT, Abstracts.
- Sebens, K. P. 2004. ASLO. Honolulu, HI. Environmental controls on tissue and skeletal growth in reef corals.
- Sebens, K.P. and F. Lipschultz 2004. Int. Coral Reef Symposium, Okinawa.
- Lipschultz, F. and K. P. Sebens. 2004 Int. Coral Reef Symposium, Okinawa. Kinetics of nutrient uptake in corals: bridging the gap between biology and engineering.
- Carrington, E., B. Helmuth and K. P. Sebens. 2004. Int. Coral Reef Symposium, Okinawa energetics and temperature stress in corals.
- Sebens, KP; O'Neill, K; Heidelberg, KB. 2006. Vertical Distribution and Diel Patterns of Zooplankton over a Florida Coral Reef. EOS, Transactions, American Geophysical Union 87. suppl., Sep 2006.
- Sebens, K. P. 2005, 2006, 2007, 2008, 2009, 2010 WSN, 2005, 2006, 2007, 2008, 2009 ASLO
- Sebens, K.P. 2009, 2010, 2011 SICB
- O'Neill, K, Sebens, KP, Heidelberg, KB. 2008. Diel Patterns of Abundance and Vertical Distribution of zooplankton over a Florida Coral Reef. Abstracts, 11th Int. Coral Reef Symposium, Ft.Lauderdale, Reefs For the Future, July 2008. p. 462

## BOOK REVIEWS

- Sebens, K. P. 1984. Review of; Sublittoral Ecology: the Ecology of the Shallow Sublittoral Benthos. R. Earll and D. G. Erwin, eds. 277 pp. Oxford University Press (1983) American Scientist, Vol. (Nov - Dec.): pp. 629.
- Sebens, K. P. 1986. Review of; Diving and Marine Biology: The Ecology of the Sublittoral. G. Warner. 210 pp. Cambridge Univ. Press (1986) American Scientist. Vol.
- Sebens, K. P. 1989. Review of: The Community Ecology of Sea Otters. G. Van Blaricom and J. A. Estes, eds. Springer Verlag 1987. 247 pp. Science 243: 954 - 955.

## TECHNICAL REPORTS

- Sebens, K. P. and R. Shimek. 1974. Analysis of potential impact on the marine environment (baseline study). Town of Friday Harbor, Washington. 36 pp.
- Sebens, K. P. and J. D. Witman. 1988. Rocky subtidal benthic surveys at a proposed sewage outfall location in Mass. Bay. Report to Battelle Ocean Sciences Inc., and Mass. Water Res. Auth. 30 pp.
- Sebens, K.P. and J. D. Witman. 1990. Effects of sewage effluent and sludge outfall on the rocky subtidal benthos of Broad Sound, Mass. Report to Massachusetts Water Res. Authority. 54 pp.
- Witman, J. D. and K. P. Sebens. 1993. Rocky subtidal communities in Massachusetts Bay: Lovell's Island to Nahant Transect. Report to the Massachusetts water Resources Authority. 84 pp
- Sebens, K.P. Ed. 2009. San Juan County Marine Stewardship Area, Monitoring Plan. Marine Resources Committee, San Juan County, WA. 90 pp.

## Ph.D. DISSERTATION

- Sebens, K. P. 1977. Habitat suitability, reproductive ecology, and the plasticity of body size in two sea anemone populations (*Anthopleura elegantissima* and *A. xanthogrammica*). University of Washington, Department of Zoology. 257 pp. Advisor: Robert T. Paine

## GRANTS AND FELLOWSHIPS AWARDED

- Doherty Foundation Fellowship, Smithsonian Tropical Research Institute (1974) \$2,200
- National Science Foundation Dissertation Improvement Award (with R.T. Paine, 1975 - 1977) \$2,400
- Harvard University: Milton Fund, 1977 - 1978, President's Fund for Innovative Teaching (Tropical Ecology course, with T. Givnish 1978 - 1979), Clarke Fund (1979 - 1980), Tozier Fund (1980 - 1981), Milton Fund (1981 - 1985)
- National Oceanic and Atmospheric Administration (N.O.A.A.) National Undersea Research Program (N.U.R.P.) Effects of Water Movement on Corals. (1984) \$7,800, (1985) \$5,850 and use of Hydrolab underwater laboratory (St. Croix) for two weeks (2 awards)
- N.O.A.A./N.U.R.P. Effects of Water Movement on Coral Feeding, Aquarius Underwater Laboratory, St. Croix. (1988) \$27,900 plus 2 weeks use of underwater laboratory.
- N.O.A.A./N.U.R.P. Ecology of Rocky Subtidal Benthos in the Gulf of Maine (with J. Witman). Six separate annual grants, including ship/submarine. 2 days ship and submersible (Mermaid 2) time, 1984: 4 days (Johnson Sea-Link) 1985: 3 days (Johnson Sea-Link) 1986: 7 days (Seaward Expl./Nitrox) 1987: \$5,000 and 15 days (Nekton Delta, Johnson Sea-Link) 1987; \$2,000 and 6 days (Nekton Delta, Johnson Sea-Link) 1988, 8 days (Seaward Expl/Nitrox), 1989 (Johnson Sea Link)
- N.S.F. Grant OCE 78 08482. The Effect of Prey Resource Availability on Growth and Competitive Success in a Space Limited Community (1978 - 1980) \$83,000
- N.S.F. Grant OCE 80 17923, The Effect of Resource Availability II (1980 - 1982) \$131,000
- N.S.F. Biological Research Resources Program Grant #DEB 80 19732. Coelenterate Collection (MCZ) Relocation and Renovation (with H. Levi, 1981 - 1982) \$82,000
- N.S.F. Grant OCE 83 08958, The Effect of Resource Availability III (1983 - 1985) \$121,000; Supplement (1984 - 1985) \$20,000
- N.S.F. Grant OCE 85 9835. The Effect of Resource Availability on Competitive Success in a Space-Limited Community (1985 - 1988). Accomplishment Based Renewal, \$185,000
- N.S.F. Biological Research Resources Program Grant #BSR 6973, Improvements to the general facilities of M.S.M.S.C., Northeastern University, Nahant MA (1985 - 1986). \$33,000
- N.S.F. Biological Research Resources Program 86 05414. Facilities Improvements for the M.S.M.S.C. (1986 - 1988). \$39,000
- Marion and Jasper Whiting Foundation. Current Trends in Coral Reef Ecology and Tropical Marine Biology. ( 1990 - 1991). \$5,400
- N.S.F. Ocean Sciences. Coastal Research Vessel 'R. V. Mysis.' transfer to Northeastern University (incl. \$5,000 outfitting) (ass. value \$160,000); (P.I., with M.P. Morse, J.D. Witman Co-P.I.s)

N.S.F. Instrumentation Award. Development of a Biological Image Processing System. J. Ayers, P.I. (K. Sebens, J. Witman, M.P. Morse co-P.I.s). (1989 - 1991). \$27,000

N.S.F. U.S./Australia Cooperative Research Program. The Effects of Water Movement on Zooplankton Capture by Corals. (1991), \$24,190 supplement

N.S.F. Biological Research Resources Program, Improvements to the General Facilities of M.S.C., Northeastern University, Nahant, (1990 - 1992) \$160,000 (plus \$160,000 cost-sharing from N.U.) \$320,000 total (P.I., with J. Ayers, J. Witman, M.P. Morse Co-PIs)

Mass. Water Resources Authority. Rocky Subtidal Studies: Outfall Siting Study. Subcontract through Camp Dresser & McKee and Battelle Inc. (1987, with J. Witman Co-P.I.) \$20,500

Mass. Water Resources Authority. Monitoring Rocky Subtidal Communities in Broad Sound, MA. (1991 - 1992, with J. Witman Co-P.I.) \$40,000

N.O.A.A./N.U.R.P., Zooplankton Capture by Corals. (1989 - 1990) \$32,000 plus use of Aquarius Underwater Laboratory, St. Croix.

N.O.A.A./N.U.R.P. Epifaunal Community Dynamics Along Onshore-Offshore Gradients in the Gulf of Maine, 6 days NITROX ship time, 3 days submersible time on Johnson Sea Link. (1990). \$8,146 science support (co-PI with J. Witman, P.I.)

N.O.A.A./N.U.R.P. Long Term Dynamics of Epifaunal Invertebrate Communities in Deep Rocky Subtidal Habitats in the Gulf of Maine: A Regional Perspective. (1991 - 1992, Co-P.I. with J. Witman, P.I.) \$9,230, incl. 7 days Nitrox Support, 2 days Johnson Sea Link submersible.

N.O.A.A./N.U.R.P. Water Movement and Zooplankton Capture by Corals. (1992 - 1993) \$18,700 plus use of Nitrox diving facilities, Key Largo, FL.

N.O.A.A./N.U.R.P. Water Movement and Zooplankton Capture by Corals. (1993 - 1994). \$18,200 plus use of Aquarius underwater laboratory for two weeks

N.S.F. Biological Oceanography, #OCE 8900144. Community Ecology of the Rocky Subtidal Zone: an Integrated Life History Approach. (1989 - 1993) \$258,000

N.S.F. Biological Oceanography. #OCE8911421. Zooplankton Capture by Corals: the Effects of Water Movement Under Field Conditions. (1989 - 1992) \$88,000

Smithsonian Institution, N.M.N.H. Coral Reef Ecosystem Studies (1992). Four weeks use of Carrie Bow Cay Lab., Belize (with J.E.N. Veron, 4 persons) incl. Airfare, lodging, plus \$1800 travel

Smithsonian Institution, Caribbean Coral Reef Ecosystem Studies, 4 weeks use of Carrie Bow Cay Laboratory, Belize (1994, with B. Helmuth) \$1500 plus above, (1995, \$850 plus above)

Smithsonian Institution, NMNH, Caribbean Coral Reef Ecosystem Studies, Four weeks use of Carrie Bow Cay Laboratory, Belize, incl. airfare, hotel, boats, meals (1996, 4 persons) (1997, for 7 persons) (March 2000 and July 2002, for 6 persons)

N.O.A.A./N.U.R.P. Water Movement and Zooplankton Capture by Corals. (1994 - 1995). \$18,500 plus use of Aquarius underwater lab. for two weeks, (1995 - 1996). \$15,000

N.S.F. Biological Oceanography. Zooplankton Capture by Corals: Effects of Water Movement and Prey Escape (1993 - 1996) \$350,000 (with J. Purcell, Co-PI)

N.S.F. International Programs, Supplement to above, Belize (1996 - 1996) \$20,000

Univ. of Maryland, UMCP International Travel Fund. Travel to Belize for Research at Smithsonian laboratory (1996) \$650

N.S.F. Envir. Biology/Biol. Oceanography (LTREB). Community Ecology of Rocky Shores; Long-Term Research in the Subtidal Zone (Mass. 1978 - 1998) (1996 - 1998), \$100,000

National Undersea Research Program (NOAA/NURC). Zooplankton Capture by Reef Corals (1999) \$19,000 plus use of Aquarius Underwater Laboratory (K. Heidelberg, J. Bythell co-inv.) Corals, (2000 - 2001) \$20,000 plus use of Aquarius Underwater Laboratory

Univ. of Maryland, GRB Semester Research Award (Spring 1999), semester salary (sabbatical)

Fulbright Senior Scholars Program. U.S. Israel Educational Foundation. Coral Reef Ecology. \$23,000. February - August 1999 (award not accepted, time conflict with other awards)

N.S.F. Biological Oceanography. Nutrition of Reef Corals, Effects of Morphology, Resource Availability, and Water Flow. (1998 - 2003), \$350,000

Smithsonian Institution, NMNH, Caribbean Coral Reef Ecosystem Studies, Two weeks use of Carrie Bow Cay Lab., Belize, with B. Helmuth, E. Carrington (2002, 2003)

N.S.F. Envir. Biology/Biological Oceanography (LTREB). Community Ecology of Rocky Shores; Long-Term Res. in the Subtidal Zone (Mass. 1978 - 2004), (awarded 1998 - 2004) \$300,000

Ocean Technology Innovation Collaborative (UMass Boston and UMass Dartmouth)

President's Science and Technology Fund (UM) (L. Goodman, Co-PI) (2004-2005) \$90,000

### **GRANTS AWARDED/ACTIVE (since 2007)**

NSF Field Stations and Marine Laboratories Program. Modernization of Computer, Communications, and Data Management Equipment at the Nantucket Field Station. U. Mass Boston (S.Oktay-Quigley PI, G. Beck, W. Robinson, W. Dripps Co-PIs) (2005-2007) \$48,685  
NIH. Genomics and the Life Aquatic. Symposium, Friday Harbor Labs, U.W. (B. Swalla, C. Amemiya, CO-PIs) (2006 – 2007) \$13,000  
NSF, Field Stations and Marine Labs. Graduate housing at FHL, (2008-2010) \$250,000 (w/ \$250,000 UW match)  
NOAA. Marine Mammal Surveys at FHL, with R. Hanson. Sept 2008-December 2011 \$18,000, \$7000  
Washington DOE. Joint Effort to Monitor the Strait, w/ J. Newton APL (2009- 2011) \$56,224  
NSF, GK-12 Program. UW OACIS – Ocean and Coastal Interdisciplinary Science (2008-2013) (D. Armstrong, D. Grunbaum Co-PIs) \$2,890,000  
NSF, Field Stations and Marine Labs. Ocean Acidification Research Facility at FHL, (2008-2010) \$275,000 (w/ \$350,000 UW match, \$75,000 donations) DBI-0829486  
Provost's Bridge Fund (UW). Subtidal ecological research at FHL (2008-2009) \$50,000  
Washington Research Foundation. Research Apprenticeship Program, FHL. (2007-2008) \$140,000, OA match \$10,000 (2009-2011)  
NSF Biological Oceanography (2009-2013) OCE0925718, Spatial Subsidy and Trophic Connectivity between Nearshore Macrophyte Production and Subtidal Food Webs (D. Duggins PI, S. Simonstad, J. Eckman, K. Sebens Co-PIs) \$893,463  
NSF Biological Oceanography (2009-2012) OCE0850809, Effects of marine preserves and nonindigenous species on rocky subtidal communities: indirect interactions, disturbance and community dynamics \$718,4888

### **GRADUATE STUDENTS:**

#### **Harvard University:**

Philip S. Lobel, 1977 - 1979 (Ph.D.) coral reef fish ecology  
Kent Redford, 1977 - 1983 (Ph.D.) ecology of myrmecophagous mammals  
Richard R. Olson, 1978 - 1984 (Ph.D.) larval ecology of ascidians  
Richard Aronson, 1979 - 1985 (Ph.D.) ecology and behavior of octopus, ophiuroids  
Colleen Cavanaugh, 1979 - 1985 (Ph.D.) biology of bacteria-invertebrate associations (with J. McCarthy, co-advisor)  
Mark Patterson, 1979 - 1985 (Ph.D.) biomechanics of benthic marine organisms. (with T. McMahon, co-advisor)

#### **Northeastern University:**

C. Shannon Briscoe, 1986 - 1988 (M. S.). predatory effects of sea urchins.  
Kathleen Durante 1985 - 1988 (M. S.). reproductive ecology of ascidians.  
Brian Helmuth 1989 - 1991 (M. S.) particle capture by corals  
Julia S. Miles 1985 - 1992 (Ph.D.). coelenterate agonistic behavior and energetics  
Krista Graham 1989 - 1992 (M. S.). spatial patterns of larval dispersal  
Douglas Updike 1988 - 1992 (M. S.) larval ecology of octocorals  
Laura Savina 1989 - 1992 (M. S.) coral symbiosis physiology  
Maria Abate (1992 - 1998) coral reef fish ecology (Ph.D., F. Davis, co-advisor)  
Katherine Paull (1992 - 2000) crustose algal ecology (Ph.D., C. Ellis, co-advisor)  
Jan Witting (1992 - 2000).suspension feeding by anthozoans (Ph.D., J. Ayers, co-advisor)

#### **University of Maryland:**

(ZOOL – Zoology, BIOL – Biology, MEES – Marine Estuarine Env. Sciences Program)  
Karla Heidelberg (1992 - 1999) feeding biology of anthozoans (J. Purcell, co-advisor) (Ph.D.). UMCES Graduate Fellowship recipient (1996 - 1997), MEES

Matthew Mills (1993 - 2000). suspension feeding by corals (Ph.D.) BIOL  
Kelton Clark (1993 - 2001). predator prey interactions in estuaries (A. Hines, co-  
advisor)(Ph.D.) MEES  
Brenda Richardson Mallon (1996-1999) Coral bioerosion (Ph.D. Program) BIOL  
Thomas Shyka (1993 - 2000) nutrient ecology of coral reefs (M. S.) MEES  
Andrea Mandella (1994 - 1996) molecular biology of corals (M. S.) ZOOL  
Kimberley Benson (1997 - 1998). water flow effects on benthos (M. S. program)  
UMCP Graduate Fellowship recipient, 1997 - 1998, MEES (trans. to CONS)  
Brian Badgley (1997 - 2001). nutrient effects on reef corals (M. S.)  
UMCP Graduate Fellowship recipient, 1997 - 1999. MEES  
Thomas Eldridge (1999 - 2001) sea urchin population biology (M. S. program) MEES  
(transferred to Northeastern Univ.)  
Elizabeth Jewett (1998 - 2005) biology of invasive species (Ph.D.) BIOL  
(NSF Training Grant, fellowship)  
Ruth Kelty (1998-2000) (Ph.D) Phosphorus uptake by reef corals MEES  
Tanja Slota (1999 - 2002) Zooplankton dynamics on coral reefs (M.S.) MEES  
Mark Lupisella (2000 - 2006). Models of Mars contamination (Ph.D.) BIOL  
James Sikes (2003 - 2004) Coral reef ecology (M.S.) BEES (transferred)  
Safra Altman (2003 - 2004) Ecology of Invasive Species (Ph.D.) BEES (transferred)

#### **University of Washington:**

Kevin Turner (2006 – present). Ecology of the rocky subtidal zone (Ph.D.)  
Robin Elahi (2006 - present). Recruitment processes in the subtidal zone (Ph.D.)  
Derek Smith (2010-present). Benthic ecology of coral reefs and Mediterranean (Ph.D.)  
Eliza Heery (2010-present). Marine community ecology, ecosystem modeling (Ph.D.)

#### **Graduate Student Dissertation/Thesis Advisory Committees (since 1999):**

(ZOOL – Zoology, BIOL – Biology, MEES – Marine Estuarine Env. Sciences Program (UM))

Gary Smith (1993 - 2000) Ph.D., MEES  
Elka Thomsen - Porter (1992 - 1999) Ph.D., MEES  
Michael Dowgiallo (1993 - 2002) Ph.D., MEES  
Mitchell Tart (1995 - 2001), Ph.D., ZOOL  
Wm. Walton (1994 - 2002), Ph.D. MEES  
Marcia Shofner (1993 - 2001), M. S. ZOOL  
Jocelyn Kasow (1995 - 2000), Ph.D. MEES  
Karen Nelson Baker (1995 - 2001), Ph.D. ZOOL  
Ruth Kelty (1997 - 2000), Ph.D. MEES  
Brad Cardinale (1997 - 2001) Ph.D. ZOOL  
Sean Grace (1996 - 2004), Ph.D. Univ. of Rhode Island  
Pamela Huggins (1997 - 2001), Ph.D. SUNY, Stony Brook, NY  
Kenneth Anthony (1999), Ph.D. Univ. of Queensland, AU, external examiner  
Allegra Small (1999 - 2001), M. S. Geology Department, UMCP  
Aura M. Fajardo (2002-2004), Ph.D. Univ. of Rhode Island  
Brad Agius (2002-2003), M.S., Northeastern University  
Elizabeth Wheat (2006-present), Univ. of Washington, Biology  
Katherine Fagan (2006-present), Univ. of Washington, Oceanography  
Megan Black (2008-present), Univ. of Washington, Biology

#### **HONORS UNDERGRADUATE ADVISEES (since 1999) (UMCP, theses):**

Melissa Smith (1995 - 1999), Zoology  
Marykate Golden (1998 - 2000), Biology  
Nathan Geraldi (1999 - 2000), Biology  
Keri O'Neill (2000 - 2002), Biology

#### **POSTDOCTORAL RESEARCHERS :**

Mark R. Patterson (1984 - 1985), Ph.D., Harvard University (MSC Postdoc, Northeastern)  
Amy Johnson (1986 - 1988), Ph.D., University of California, Berkeley (MSC Postdoc)

Peter Edmunds (1989-1990), Ph.D. University. (MSC Postdoc)  
Joaquim Garrabou (1998 - 2000), Ph.D., Universitat de Barcelona, Spain (UM Postdoc)  
Karla Heidelberg (1999 - 2001), Ph.D., University of Maryland, College Park (UM Postdoc)  
Hannah Stewart (2007 - 2008), Ph.D., University of California, Berkeley (UW FHL Postdoc)  
Sarah Gilman (2005 - 2007), Ph.D. Stanford University (UW FHL Postdoc)  
Svetlana Maslakova (2006 - 2007) Ph.D. George Washington University (UW FHL Postdoc)  
Robin Kodner (2008-2010), Ph.D., Harvard University (UW FHL Postdoc)

## **COURSES TAUGHT**

### **Harvard University (1977 - 1984):**

Nature and Regulation of Marine Ecosystems, Spring 1977, 1980, Fall 1981, with J. McCarthy and R. Turner (Biology 255, G).  
Invertebrate Zoology, Fall 1977, 1978, 1979, 1980, 1981, 1984, with H. Levi, 1982, 1983 with K. Boss (Biology 10a, U).  
Population and Community Ecology, Spring 1978, 1979, 1980 (Biology 154, G) also 1982, 1984 with W. Bossert.  
Benthic Marine Ecology, Spring 1979, 1981, 1983 (Biology 254, G).  
Tropical Ecology, Fall 1978, 1980, 1982, 1984 with T. Givnish, O. Solbrig, P. Ashton (Biology 250, G), Harvard University and University of the Andes, Merida, Venezuela.  
Selected Topics in Population and Community Ecology, Spring 1980, with R. Cook and T. Givnish (Biology 251, G).  
Topics in Community Ecology, Fall, 1977 - 1985, each semester (Biology 343, G). Supervised research, 1978 - 1985 (Biology 90r, U). Supervised readings, undergraduate, 1977 - 1984 (Biology 91r, U).  
Population Biology: Ecology (Biology 19, U). Spring 1982, 1983, 1984.  
Introductory Ecology, Spring 1979, 1980, 1981, 1982, with B. L. Thorne, 1982, 1984, 1985, 1986, 1987, 1988 (Harvard Extension E19c, U)  
Introductory Biology (for non-majors, U), Fall 1973, with S. Waltz, Dept. of Zoology, Univ. of Washington).  
Advanced Population Biology, Fall 1981, with O. Solbrig, E. Pianka, J. Silva, S. Newell. University of Puerto Rico, Rio Piedras, P.R. (U, G).  
Rocky Shore Ecology, 1982, with J. R. Lewis. Friday Harbor Laboratories, U. Washington (U,G).  
Marine Biology, Summer 1983, 1984, with R. R. Olson and R. Woollacott. 1985, 1986, 1987, 1988, 1989, 1990 with R. Etter., J. Choe Harvard (U)

### **Northeastern University 1983 - 1991:**

Adaptations of Marine Organisms, Summer 1983, with D. Cheney and M. Patterson. Northeastern University, M. S. C. (U, G)  
Benthic Marine Ecology, Summer 1985, 1986, 1987, with J. Witman. Northeastern (U, G)  
Diving Research Methods, 1986, 1987, 1988, 1989 with R. Etter, G. Boden and J. Witman. Northeastern University, M. S. C. (U)  
East/West Marine Biology Program, (Northeastern Univ., Univ. of Oregon joint program), Director 1985 - present. Lectures in courses: Coral Biology, Coastal Biology, Adaptations of Marine Organisms  
Biology of Corals and Coral Reefs, 1987, 1988, 1989, 1992 with J. Witman, J. Veron, Northeastern Univ. M.S.C. (U, G) at Discovery Bay Marine Lab, Jamaica  
Population Biology of Marine Organisms, winter 1987, with J. Witman, Northeastern Univ. (G)  
Biomechanics, winter 1990, with M. Patterson, Discovery Bay Marine Lab Jamaica, (U-UG)  
Ocean & Coastal Processes, spring 1990, 1991, with P. Rosen, Northeastern U., M.S.C. (U-UG)

### **University of Maryland (1992 - 2004) (G, graduate level, U, undergraduate):**

Marine Ecology Seminar (MEES 608A). Fall 1992, 1993, 1995, 2001 (G)  
Benthic Ecology (MEES 698K) Fall 1993. (G), with K. Tenore, R. Newell (1/4 of 3 cr course)  
Special Topics: Hydrodynamics and Benthic Ecology (MEES 698). Summer 1993. (G)  
Biological Oceanography (ZOOL 375) (U) (3 cr.) Spring 1994 with J. White, Spring 1996 with D. Mann, Spring 1993, 1995, 1998, 2002 with M Palmer, Spring 2000 with J. Merrill  
Marine Community Ecology (ZOOL 677, MEES 698A). (4 cr.) Spring 1995, 1997, 2000, 2003 (G)  
Honors research. (ZOOL. 399H), each semester 1993-present (U), (ZOOL328Z). Fall 1994 (U)  
Special Problems in Zoology. (ZOOL.319). Fall 1994 - present (U)  
Special Problems (MEES 699). Spring, Fall 1994, Spring 1996 (G)

Honors Research (ZOOL 318h) (2 cr.) Fall/Spring 1995 (U)  
Special Problems in Zoology (ZOOL 319) (2cr), Spring 1995 - Spr. 1997 (U)  
Seminar: Larval Ecology (MEES 608A) (2cr.) (with D. Breitburg), Fall 1995 (G)  
BEES Seminar (ZOOL 608E) (1 - 2 cr.) (with C. Fenster), Fall 1996, Spring 1997 (G)  
Honors Seminar (ZOOL 308H) (1 cr.), Fall 1997, Spring 1998 (U)  
Oceanography Laboratory (ZOOL 338R). ( 2 cr.) Spring 1998 - 2002 (U)  
Marine Biology Research (Univ. Rhode Island, BBSR) (6 cr.) 2000 (U)

**University of Washington (2005 - present)** (G, graduate level, U, undergraduate):

Ecology Seminar (with J. Ruesink) 2006-2011 (1 cr.) (G)  
Marine Benthic Ecology Research Apprenticeship (with M. Dethier) (6 cr.) 2007 (U)  
Subtidal Ecology Research Apprenticeship (with D. Duggins) (15 cr.) 2007 (U)  
Topics in Advanced Ecology Biology/Fish 567 (2009, 2011) (with D. Sprugel and others)(G)

### **NATIONAL/INTERNATIONAL MEETINGS ORGANIZED:**

Population Biologists of New England, Harvard University (November 1977) with R. Cook, T. Givnish, B. L. Thorne  
Benthic Ecology Meetings, Harvard University (March 1982) with R. Turner  
Boston Harbor, Mass. Bay Conferences, with Mass. Bay Cons. (October 1985, 1986, 1987)  
Centennial Meeting, Amer. Soc. Zoologists (December 1989, Co-host, Planning Committee Presentation)  
8th International Coral Reef Symposium, Symposium organizer (for June 1996 meeting, Panama ) with A. Genin. Special session on water flow effects on reefs.  
American Society of Limnology and Oceanography. February 1999. Santa Fe, N.M., Organizer, with A. Genin., symposium on zooplanktivory in lakes and oceans.  
Western Association of Marine Laboratories, UW FHL 2009  
Western Association of Marine Laboratories, Seward, AK 2009

### **PAPERS PRESENTED AT SCIENTIFIC MEETINGS (1996 - present):**

American Society for Limnology and Oceanography. San Diego, CA. Feb. 1996  
Scale Effects in Coral Reef Communities  
8th International Coral Reef Symposium, Panama City, Panama, June 1996  
Adaptive Responses to Water Flow: Morphology, Energetics and Distribution of Reef Corals (also co-author on three other papers for this meeting)  
American Association of Underwater Scientists. Invited Keynote. Long-term research in the rocky subtidal zone (Mass. 1977 - 1997). November 1997  
American Society for Limnology and Oceanography. San Diego, CA. Feb. 1998  
Three presentations, with M. Mills, K. Heidelberg, T. Shyka presenters.  
Heidelberg, K., K. P. Sebens and J.E. Purcell 1999. Zooplankton escape behavior from coral predators. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM. Abstracts.p. 82  
Sebens, K.P. 1999. Marine bioinvasions in the rocky subtidal zone (MA 1977 - 1998).  
First National Conference on Marine Bioinvasions, M.I.T., Cambridge, MA Proc. (in press).  
Sebens, K. P. 1998. A model of coral zooplankton capture. Int. Society for Reef Studies, European Meeting, Perpignan, France. September 1998.  
Sebens, K.P. 1999. Long term community studies in the subtidal zone. R.T. Paine Symposium. Do species matter? Washington  
Heidelberg, K. and K. P. Sebens. 2001. Zooplankton distribution on coral reefs; implications for coral prey capture. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM.  
Sebens, K.P., J. Witting and C. Ferrier-Pages. 2001. Zooplankton capture by reef corals: effects on tissue and skeletal growth. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM.  
Sebens, K.P., J. Witting and C. Ferrier-Pages. 2001. Zooplankton capture by reef corals enhances tissue and skeletal growth. 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham N.H.  
Agius, B.P. and K. P. Sebens 2001. Long-term studies of the Massachusetts rocky subtidal zone, 1978 - 2000. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM.  
Agius, B.P. and K. P. Sebens 2001. Multidecadal community ecology: research in the rocky subtidal zone of Massachusetts (1978 - 2000). 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham, N. H.

- Badgley, B.D., F. Lipschultz, and K. P. Sebens. 2001. Nitrate uptake by a Bermudian scleractinian Coral, *Diploria strigosa*, under realistic environmental conditions. 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham, N. H.
- Geraldi, N.R. and K. P. Sebens. 2001. Rocky subtidal community ecology: comparison of photographic and video sampling of benthic surfaces. 30<sup>th</sup> Annual Marine Benthic Ecology Meetings, Durham, N.H.
- Sebens, K.P. 2001. Long term population dynamics of nudibranch mollusks in New England. World Congress of Malacology. Vienna, Austria
- Sebens, K.P. 2002. Size gradients in intertidal and subtidal marine invertebrates: the role of energetic and mechanical limits. SICB, Anaheim, CA
- Sebens, K.P. 2002. Water flow, growth and energetics of corals in Belize. Benthic Ecology Meetings, Orlando, FL
- Sebens, K.P. 2003. Location, allocation, translocation: determinants of growth rate in corals. SICB, Toronto, Canada
- Sebens, K.P. 2003. Environmental factors limiting tissue and skeletal growth in reef corals. Benthic Ecology Meetings, Groton, CT,
- Goodbody, G. and K. P. Sebens 2003. Sea urchin demography, Benthic Ecology Mtg., Groton, CT
- Sebens, K. P. 2004. ASLO, Honolulu HI. Environmental controls on tissue and skeletal growth in reef corals.
- Sebens, K.P. and F. Lipschultz 2004. Int. Coral Reef Symposium, Okinawa. Water flow and its effects on coral nutrition across a broad range of reef habitats in Bermuda
- Lipschultz, F. and K. P. Sebens. 2004 Int. Coral Reef Symposium, Okinawa. Kinetics of nutrient uptake in corals: bridging the gap between biology and engineering.
- Carrington, E., B. Helmuth and K. P. Sebens. 2004. Int. Coral Reef Symposium, Okinawa. Coral energetics and temperature stress.
- Sebens, K. P. 2005, 2006, 2007, 2008, 2009, 2010 WSN, 2005, 2006, 2007, 2008, 2009 ASLO
- Sebens, K.P. 2009, 2010, 2011 SICB
- O'Neill, K, Sebens, KP, Heidelberg, KB. 2008. Diel patterns of abundance and vertical distribution of zooplankton over a Florida coral reef. 11th Int. Coral Reef Symp., Ft.Lauderdale, July 2008

### **INVITED SEMINARS (1999 - present)**

- Marine Bioinvasions Conference, M.I.T., Cambridge, MA 1999
- Centre Scientifique de Monaco, Musee Oceanographique, Principaute de Monaco, 1999
- Centre d'Océanographie de Marseille, Station Marine d'Endoume, Marseille, France, 1999
- University of S. Carolina, Columbia SC 2000
- University of Rhode Island, Kingston, RI 2001
- Roger Williams University, R. I. 2001
- University of Rhode Island Graduate School of Oceanography, Narragansett, RI 2001
- University of Massachusetts, Dartmouth, 2002
- Salve Regina University, Newport RI, 2002
- University of Massachusetts, Boston, 2003, 2004
- Northeastern University, Marine Science Ctr, Nahant, MA 2003
- University of Washington, Seattle 2004. UW Friday Harbor Labs 2004
- University of Washington, School of Aquatic and Fisheries Science 2006
- University of California, Los Angeles, Biology 2006
- University of Oregon, OIMB, November 2008
- National Association of Marine Laboratories, March 2010
- World Association of Marine Laboratories, April 2010
- UW FHL, Natural History of the Subtidal Zone, Oct. 2010, April, May 2011
- UW FHL Seminar, Coral Ecology, June 2010

**SERVICE: UNIVERSITY (1999 - present)** (BEES – Behavior, Ecology, Evolution, Systematics Graduate Program, ZOOL – Zoology, BIOL – Biology, MEES – Marine Estuarine Environmental Sciences Graduate Program)

### **Department Committees (UW Biology):**

- Faculty Review Committee, UW (Biol) (2007-present)
- FHL Advisory Committee, FHL Faculty Committee, FHL Preserves Committee
- FHL Associate Director Search Committee (2007-2008)

College of the Environment, Structure Committee (2007-2008)  
FHL Development Advisory Board, Focus Committee (2006-present)  
NSF Oacis GK-12 Program, Steering Committee (2008- present)  
Helen R. Whiteley Ctr. Advisory Committee, (2006-present)

**University (UW) Committees:**

Director, Friday Harbor Labs, UW, (meets with: faculty committee, advisory committee, Development Advisory Bd). (2005-present)  
UW College of the Environment, Structure Committee (2007-2008)  
UW College of the Environment, Executive Committee (2010-present)  
FHL Advisory Committee, FHL Faculty Committee, FHL Preserves Committee  
FHL Development Advisory Board, and Focus Committee (2006-present)  
NSF OACIS GK-12 Program, Steering Committee (2008- present)  
Helen R. Whiteley Ctr. Advisory Committee, (2006-present)  
College of the Environment, Executive Committee (2010-present)  
Provosts's FHL Financial Working Group (2009-2010)  
Provost's Committee on FHL Strategic Planning (2010)

**Other Outreach (2007-present):**

Marine Resources Committee, San Juan County WA (2005-present), Chair:  
Science Subcommittee (2007-present)  
FHL Open House, Organizer and Presenter ( to >700 visitors) May 2007-2011  
San Juan Nature Institute – collaborator and advisor for joint programs (2006-present)  
Marine Science Associates Lecture Series (2006-present), organizer  
FHL K-12 Program – participant and advisor (2005-present)  
UW GK12 Program – PI and Steering Committee, working with SJC and Seattle High Schools (2008-2013)  
The Fund-Raising School, participant, May 2009 (1 week course), Seattle  
Marine Protected Areas Work Group, Olympia WA, 2008-2010  
Marine Managers Workshop, FH, Organizer, with MRC. May 2009- 2011  
UNESCO Meeting: WAMS (World Assoc. of Marine Stations, founding), 2010