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Education

- 1999 – 2005 Ph.D. Ecology, Evolution and Marine Biology, University of California, Santa Barbara, CA.
“The population genetics and dispersal dynamics of kelp bass, *Paralabrax clathratus*”
Advisor: SD Gaines
- 1993 – 1997 B.A. Biology, Pomona College

Professional Appointments

- 2014 – present Associate Researcher III, NCEAS, UCSB
- 2012 – present Affiliate Researcher, Hawai'i Institute of Marine Biology, UH
- 2005 – present Center Associate, NCEAS, UCSB
- 2012 – 2014 Associate Researcher II, Marine Science Institute, UCSB
- 2008 – 2012 Assistant Researcher II-IV, Marine Science Institute, UCSB
- 2005 – 2011 Post-doctoral Researcher, Hawai'i Institute of Marine Biology, Advisor: RJ Toonen
- 1997 – 1999 Laboratory Technician, Dept. of Ecology and Evolution, UCLA, Advisor: L Muscatine

Publications

- 2015 Selkoe KA, Gaggiotti OE, Trembl EA, Donovan MK, Wren J, Hawaii Reef Connectivity Consortium, Toonen RJ. Community genetics of Hawaiian reefs reflect habitat, history, thermal stress and ecology. **PNAS** *in review*.
- 2015 Selkoe KA, Scribner K, Galindo HM. Ch. 13: Applications of landscape genetics to aquatic environments. *In: Landscape Genetics: Concepts, Methods, Applications* (eds. Balkenhol N, Waits L, Storfer A, Cushman S). Wiley & Sons Press *in press*
- 2015 Selkoe KA, Blenckner T, Caldwell MR, Crowder L, Erickson A, Essington T, Estes J, Fujita R, Halpern BS, Hunsicker M, Kappel CV, Kelly R, Kittinger JN, Levin PS, Lynham J, Mach M, Martone R, Mease L, Salomon A, Samhuri J, Scarborough C, White C, Zedler J. Principles for managing marine ecosystems prone to tipping points. **Ecosystem Health and Sustainability** *in press*
- 2015 Hunsicker M, Kappel C, Halpern BS, Selkoe KA, Scarborough C, Mease L, Armhein A. Characterizing driver-response relationships in marine pelagic ecosystems for improved ocean management. **Ecological Applications** *in press*
- 2015 Halpern BS, Best B, Casey K, Kleisner K, Longo C, Potapenko J, Rockwood C, Selig E, Selkoe KA, Stewart J, Walbridge S. Patterns and trends in cumulative impact of human activities on the world's ocean. **Nature Communications** *in press*
- 2015 Karr K., Fujita R, Halpern B, Kappel C, Crowder L., Selkoe KA, Alcolado P, Rader D. Thresholds in Caribbean coral reefs: implications for ecosystem-based fishery management. **Journal of Applied Ecology** 52:402-412
- 2014 Tallis H, Lubchenco J *et al.* Working together: A call for inclusive conservation. **Nature** 515:27-28

- 2014 Selkoe KA, Gaggiotti O, Tobo Lab, Bowen B, Toonen RJ. Emergent patterns of population genetic structure for a coral reef community. **Molecular Ecology** 23:3064-3079
- 2014 Beger M, Selkoe KA, Trembl E, Barber PH, von der Heyden S, Crandall ED, Toonen RJ, Riginos C. Evolving coral reef conservation with genetic information. **Bulletin of Marine Science** 90:159-185
- 2014 Bowen BW, Shanker K, Yasuda N, Malay MCD, von der Heyden S, Paulay G, Rocha LA, Selkoe KA, Barber PH, Williams St, Lessios HA, Crandall ED, Bernardi G, Meyer CP, Carpenter KE, Toonen RJ. Phylogeography unplugged: comparative geographic surveys in the genomic era. **Bulletin of Marine Science** 90:13-46
- 2013 Poortvliet M, Longo GC, Selkoe KA, Barber PH, White C, Caselle JE, Matus AP, Gaines SD, Bernardi G. Phylogeography of the California sheephead, *Semicossyphus pulcher*: the role of deep reefs as stepping stones and pathways to antitropicality. **Ecology and Evolution** 3:4558-4571
- 2013 Halpern BS, Selkoe KA, White C, Albert S, Aswani S, Lauer M. Marine protected areas and resilience to sedimentation in the Solomon Islands. **Coral Reefs** 32:61-69.
- 2013 Iacchei M, Ben-Horin T, Selkoe KA, Bird CE, Garcia-Rodriguez FJ, Toonen RJ. Combined analyses of kinship and Fst suggest potential drivers of chaotic genetic patchiness in high gen-flow populations. **Molecular Ecology** 22: 3476-3494
- 2013 Klein CJ, Tulloch VJ, Halpern BS, Selkoe KA, Watts ME, Steinback C, Scholz A, Possingham HP. Tradeoffs in marine reserve design: habitat condition, representation, and socioeconomic costs. **Conservation Letters** 6:324-332
- 2012 Anderson P, Chapman E, N. Dorry, M. Hall-Arber, A. Scaroni, Selkoe KA, S. Showalter Otts, J. Stoll, E. Tyler. Starting and Maintaining Community Supported Fishery (CSF) Programs. A Resource Guide for Fishermen and Fishing Communities. **Sea Grant Publication** NSGLC-12-04-03, *an internal reviewed white paper*
- 2012 Klinger DH, Turnipseed M, Anderson JL, Asche F, Crowder LB, Guttormsen AG, Halpern BS, O'Connor MI, Sagarin R, Selkoe KA, Shester GG, Smith MD, Tyedmers T. Moving beyond the fished or farmed dichotomy. **Marine Policy** 38:369-374.
- 2012 Sala E, Ballesteros E, Dendrinis P, Ferretti F, Foley D, Frascchetti S, Friedlander A, Garrabou J, Güçlüsoy H, Guidetti P, Halpern BS, Hereu B, Karamanlidis A, Kizilkaya Z, Macpherson E, Mangialajo L, Mariani S, Micheli F, Riser K, Sales M, Starr R, Selkoe KA, Tomas F, Zabala M. The structure of Mediterranean rocky reef ecosystems across environmental and human gradients. **PLoS ONE** 7(2): e32742
- 2011 Selkoe KA, Halpern BS, Micheli F, Kappel CV. Changing ecosystem state across a gradient of fishing and pollution impacts along the Mediterranean coast of Morocco (Al Hoceima Pilot Site). *The Changing Oceans Expedition, Report to the IUCN, a peer reviewed white paper*
- 2011 Selkoe KA, Toonen RJ. Marine connectivity: a new look at pelagic larval duration and genetic metrics of dispersal. **Marine Ecology Progress Series** 436:291-305
- 2011 Kappel CV, Halpern BS, Selkoe KA, Cooke RM. Eliciting expert knowledge of ecosystem vulnerability to human stressors to support comprehensive ocean management. In: *Expert Knowledge and Its Application in Landscape Ecology*. Springer, NY
- 2010 Selkoe KA, Watson J, White C, Ben-Horin T, Iacchei M, Miterai S, Siegel D, Gaines SD, Toonen RJ. Taking the chaos out of genetic patchiness: seascape genetics reveals ecological and oceanographic drivers of genetic patterns in three temperate reef species. **Molecular Ecology** 19: 3708-3726
- 2010 White C, Selkoe KA, Watson J, Siegel D, Zacherl D, Toonen RJ. Ocean currents help explain population genetic structure. **Proceedings of the Royal Society Series B** 277:1688-1694

- 2010 Smith MD, Roheim CA, Crowder LB, Halpern BS, Turnipseed M, Anderson JL, Asche F, Bourillon L, Guttormsen AG, Khan A, Liguori LA, McNevin A, O'Connor MI, Squires D, Tyedmers P, Brownstein C, Carden K, Klinger DH, Sagarin R, Selkoe KA. Sustainability and global seafood. **Science** 327:784-786
- 2010 Teck SJ, Halpern BS, Kappel CV, Micheli F, Selkoe KA, Crain CM, Martone R, Shearer C, Arvai J, Fischhoff B, Murray G, Neslo R, Cooke R. Using expert judgement to estimate marine ecosystem vulnerability in the California Current. **Ecological Applications** 20: 1402-1416
- 2009 Ben-Horin T, Iacchei M, Selkoe KA, Toonen RJ. Eight polymorphic microsatellite loci for the California spiny lobster, *Panulirus interruptus*. **Conservation Genetic Resources** 1:193-197
- 2009 Halpern BS, Ebert CM, Kappel CV, Madin EMP, Micheli F, Perry M, Selkoe KA, Walbridge S. Global priority areas for incorporating land-sea connections in marine conservation. **Conservation Letters** 2:189-196
- 2009 Halpern BS, Kappel CV, Selkoe KA, Micheli F, Ebert C, Kontgis C, Crain CM, Martone R, Shearer C, Teck SJ. Mapping cumulative human impacts to California Current marine ecosystems. **Conservation Letters** 2:138-148
- 2009 Poortvliet M, Olsen JL, Selkoe KA, Coyer JA, Bernardi G. Isolation and characterization of 11 microsatellite primers for a temperate reef fish, the California sheephead (*Semicossyphus pulcher*). **Molecular Ecology Resources** 9:429-430
- 2009 Vogel AB, Selkoe KA, Anderson D, Emunds S. Development and inheritance of molecular markers in the kelp bass *Paralabrax clathratus*. **Fisheries Science** 75:525-527
- 2009 Selkoe KA, Halpern BS, Ebert CM, Franklin EC, Selig EL, Casey KC, Bruno J, Toonen RJ. A map of human impacts to a "pristine" coral reef ecosystem, the Papahānaumokuākea Marine National Monument. **Coral Reefs** 28:635-650
- 2009 Kappel CV, Halpern BS, Martone RG, Micheli F, Selkoe KA. In the zone: Comprehensive ocean protection. **Issues in Science and Technology** 25: 33-44
- 2009 Selkoe KA, C Culver. Santa Barbara Channel Seafood. **Edible Santa Barbara** 3:17-19, *popular press*
- 2008 Neslo R, Micheli F, Kappel CV, Selkoe KA, Halpern BS, Cooke RM. Modeling stakeholder preferences with probabilistic inversion: application to prioritizing marine ecosystem vulnerabilities. In: *Real time and deliberative decision making: application to risk assessment for non-chemical stressors*. Linkov I, Ferguson E, Magar V (eds). Springer, Amsterdam, pp 265-284
- 2008 Selkoe KA, Henzler C, Gaines SD. Seascape genetics and the spatial ecology of marine populations. **Fish and Fisheries** 9:363-377
- 2008 Selkoe KA, Kappel CV, Halpern BS, Micheli F, D'Agrosa C, Bruno JF, Casey KS, Ebert C, Fox HE, Fujita R, Heinemann D, Lenihan HS, Madin EP, Perry MT, Selig ER, Spalding M, Steneck R, Walbridge S, Watson R. Response to technical comment on 'A global map of human impact on marine ecosystems.' **Science** 321: 1446
- 2008 Halpern BS, Selkoe KA, Kappel CV, Micheli F, D'Agrosa C, Bruno JF, Casey KS, Ebert C, Fox HE, Fujita R, Heinemann D, Lenihan HS, Madin EP, Perry MT, Selig ER, Spalding M, Steneck R, Walbridge, Watson R. Response to letter on 'A global map of human impact on marine ecosystems.' **Science** 321: 1443
- 2008 Selkoe KA, Halpern BS, Toonen RJ. Evaluating anthropogenic threats to the Northwestern Hawaiian Islands. **Aquatic Conservation: Marine and Freshwater Ecosystems** 18: 1149-1165
- 2008 Halpern BS, Selkoe KA, Walbridge S, Kappel CV, Micheli F, D'Agrosa C, Bruno JF, Casey KS, Ebert C, Fox HE, Fujita R, Heinemann D, Lenihan HS, Madin EP, Perry MT, Selig ER, Spalding M, Steneck R, Watson R. A global map of human impact on marine ecosystems. **Science** 319: 948-952

- 2007 Selkoe KA, Vogel A, Gaines SD. Effects of ephemeral circulation on recruitment and connectivity of nearshore fishes spanning the US-Mexican border. **Marine Ecology Progress Series** 359:209-220
- 2007 Halpern BS, Selkoe KA, Micheli F, Kappel CV. Assessing global and regional threats to marine ecosystems. **Conservation Biology** 21:1301-1315
- 2007 Worm B, Barbier EB, Beaumont N, Duffy JE, Folke C, Halpern BS, Jackson JBC, Lotze HK, Micheli F, Palumbi SR, Sala E, Selkoe K, Stachowicz JJ, Watson R. Biodiversity loss in the ocean: How bad is it? Response. **Science** 316:1282-1284
- 2007 Worm B, Barbier EB, Beaumont N, Duffy JE, Folke C, Halpern BS, Jackson JBC, Lotze HK, Micheli F, Palumbi SR, Sala E, Selkoe K, Stachowicz JJ, Watson R. Response to comments on 'Impacts of biodiversity loss on ocean ecosystem services'. **Science** 316:1285
- 2006 Worm B, Barbier EB, Beaumont N, Duffy JE, Folke C, Halpern BS, Jackson JBC, Lotze HK, Micheli F, Palumbi SR, Sala E, Selkoe K, Stachowicz JJ, Watson R. Impacts of biodiversity loss on ocean ecosystem services. **Science** 314:787-790
- 2006 Selkoe KA, Gaines SD, Caselle J, Warner RR. Current shifts and kin aggregation explain genetic patchiness in fish recruits. **Ecology** 87(12): 3082-3094
- 2006 Selkoe KA, Toonen RJ. Microsatellites for ecologists: a practical guide to using and evaluating microsatellite markers. **Ecology Letters** 9: 615-629
- 2004 Selkoe KA, Vogel A, Aftab BT. Eight polymorphic microsatellite markers for kelp bass, *Paralabax clathratus*, amplified in three multiplex PCR sets. **Molecular Ecology Notes** 5(1):127-129
- 2003 Szebenyi G, Morfini GA, Babcock A, Gould M, Selkoe K, Stenoien DL, Young M, Faber P, MacDonald M, McPhaul MJ, Brady ST. Neuropathogenic forms of huntingtin and androgen receptor inhibit fast axonal transport. **Neuron** 40:41-52
- 2002 Swearer SE, Shima JS, Hellberg ME, Thorrold SR, Jones GP, Robertson DR, Morgan SG, Selkoe KA, Ruiz GM, Warner RR. Evidence of self-recruitment in demersal marine populations. **Bulletin of Marine Science** 70(1) Suppl.:251-271

Grants Awarded

- 2014 Impacts of Changing Climate on the Pacific Remote Islands Marine National Monuments, **NOAA**, 1 yr – \$90,000
- 2014 Identifying indicators and thresholds for reef resilience in the Hawaiian Archipelago, Coral Reef Conservation Program, **NOAA**, 1 yr - \$55,013
- 2013 Multispecies connectivity: Comparative analysis of marine connectivity and its drivers for the coral reefs of Hawaii, Biological Oceanography Division of the **National Science Foundation**, 3 yrs – \$665,000
- 2012 A community supported fishery for Santa Barbara, **RSF Social Finance**, 1 yr- \$2,000
- 2012 Seascape Genetics of the Hawaiian Archipelago, sub-contract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$38,500
- 2012 Ecosystem Thresholds and Indicators for Marine Spatial Planning, **Gordon and Betty Moore Foundation**, 4 yr – \$3,073,140
- 2011 Toward Resilience and a Sustainable Seafood Supply: Assessing Direct Marketing Approaches for the West Coast Fishing Communities, **Sea Grant**, 2 yr – \$200,797
- 2011 Planning Grant: Identifying Thresholds, Developing Key indicators, and Operationalizing Their Use in Coastal Marine Spatial Planning, **Gordon and Betty Moore Foundation**, 1 yr – \$40,535
- 2011 A Community Supported Fishery Program for UCSB, **UCSB Associated Students Coastal Fund**, 1 yr – \$12,400

- 2010 Ecosystem Based Management Science, subcontract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$75,000
- 2010 A Spatial Map of Ocean and Great Lakes Health for New York State, **New York Department of State**, 2 yr – \$149,991 (declined by UC legal office)
- 2009 Ecological and Economic Impacts and Trade-Offs of Human Activities in Massachusetts Waters, **Massachusetts Ocean Partnership**, 2 yr – \$150,000
- 2009 Map of Cumulative Impact for Massachusetts State Waters, **Massachusetts Ocean Partnership**, 1 yr – \$84,000
- 2009 Ecosystem Based Management Science, subcontract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$75,000
- 2008 Ecosystem Based Management Science, subcontract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$70,000
- 2007 Ecosystem Based Management Science, subcontract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$70,000
- 2006 Ranking and Mapping Human Threats and Impacts to Marine Ecosystems in the California Current, **Gordon and Betty Moore Foundation**, 2 yr – \$190,616
- 2006 Ecosystem Based Management Science, subcontract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$70,000
- 2005 Population Connectivity of Coastal Fishery Species Across the California-Mexico International Border,” Coastal Environmental Quality Initiative, **UC Marine Council**, 2 yr – \$390,000
- 2005 Ecosystem Based Management Science, subcontract of Northwestern Hawaiian Islands Coral Reef Research Partnership, **NOAA**, 1 yr – \$90,000
- 2004 Putting Ocean Wilderness on the Map, Working Group, **National Center for Ecological Analysis and Synthesis**, 1 yr – \$17,500
- 2004 Dissertation Enhancement, International Programs, **National Science Foundation**, 2 yr – \$27,000
- 2003 Graduate Research Grant, **Sigma Xi Science Society**, 1 yr – \$1,200.
- 2003 Graduate Research Grant, **UCSB Graduate Division**, 1 yr – \$6,000

Selected Invited Talks

- 2015 39th Annual Larval Fish Conference (keynote), Vienna, Austria
- 2014 Moore Foundation, Palo Alto, CA
- 2014 Department of Aquatic Resources, Honolulu, Hawaii
- 2014 Kona IEA Symposium, Kona, Hawaii
- 2013 International Association of Landscape Ecologists, Austin, TX
- 2013 Landscape Genetics Short Course, Gottingen, Germany
- 2012 Molecular Ecology and Evolution of the Indo-Pacific, NESCent workshop, Raleigh, NC
- 2011 International Marine Conservation Congress, Victoria, Canada
- 2011 International Conference in Landscape Genetics (keynote, but unable to attend), Poland
- 2011 Symposium on Dispersal of Marine Organisms (keynote, but unable to attend), Charleston, SC
- 2011 Bodega Marine Lab Seminar Series, Bodega, CA
- 2010 Cargill Europe/Antinea, Geneva, Switzerland
- 2009 Hawaii Geographic Information Coordinating Council, Honolulu, HI
- 2008 University of New Hampshire, Ocean Process Analysis Laboratory, Durham, NH
- 2008 NOAA National Ocean Services, Silver Spring, MD
- 2008 United Nations Environment Programme, Copenhagen, Denmark
- 2008 National Marine Sanctuaries Program workshop, Big Sur, CA
- 2008 American Association for the Advancement of Science annual meeting, Boston, MA
- 2007 European Statistical Genetics Workshop, La Foully, Switzerland

2005 Dept. Ecology and Evolutionary Biology, UC Irvine, CA
2004 Marine Population Genetics Seminar, Hopkins Marine Station, Monterey, CA

Teaching and Mentoring

2009 – 2015 Co-advisor to two UCSB postdoctoral fellows
2009 – 2014 Mentor to 5 Bren MESM research interns
2008 – 2012 Ph.D. committee member for two UCSB graduate students
2007 – 2011 Guest lecturer and project mentor, Blue Horizons, UCSB summer program
2009 – 2010 Proposer of and Co-advisor to a UCSB Bren School Master's Project
2001 – 2006 Mentor to 1 high school student, 9 undergraduates and 2 graduate student interns
Spring 2004 Teaching Assistant to Bill Rice, Advanced Biostatistics (Graduate Level), EEMB, UCSB
Spring 2003 Teaching Assistant to Bill Rice, Theory of Population Genetics (Graduate Level), UCSB
2001 – 2003 Leader of a graduate/post-doc study group on population genetic data analysis at UCSB
Fall 2001 Teaching Assistant, Introduction to Molecular Biology, EEMB, UCSB

Awards and Honors

Invited participant, Media training workshop, COMPASS/NCEAS, 2009
Invited participant, Bayesian Statistics for Genetic Data, U. Lausanne, 2007
Merit Scholarship, Marine Conservation Science Course, Oregon State University, OR 2005
Dissertation Year Fellowship, Graduate Division, UC Santa Barbara, 2005
Merit Scholarship, Statistical Genetics, North Carolina State U, 2004
Wooster Mentorship Program Award, Dept. of EEMB, UC Santa Barbara, 2004
UC Regent's Fellow, Dept. of EEMB, UC Santa Barbara, 2002
Graduate Research Fellowship, NSF, 2002

Academic and Community Service (unpaid)

2015 Advisor and workshop participant, Marine Wilderness 10+10 Project, WILD Foundation
2015 National Science Foundation panelist, Arlington, VA
2015 Waterscape Genetics symposium organizer, International Association of Landscape Ecologists World Congress, Portland
2013 – present Co-Founder and co-director, Santa Barbara Seafood Coalition
2015 – present Consultant to Community Environmental Council, Santa Barbara
2014 – present Consultant to Salty Girl Seafood, Santa Barbara
2006, '08, '15 Exhibit Consultant, Ty Warner Sea Center, Santa Barbara
2011 – 2014 Founder and Co-director, Community Seafood, Santa Barbara
2011 – 2012 Advisory Board Member, Community Supported Fisheries National Symposium
2011 – 2012 Advisory Board Member, Virginia Sea Grant Community Supported Fishery Programs
2010 – 2013 Chief Field Scientist, *The Changing Oceans Expedition*, Antinea Foundation
2006 – 2013 Co-Founder and director of Santa Barbara Sustainable Seafood Program
2009 – 2010 Science Advisory Board Member, Seafood for the Future, Aquarium of the Pacific
2007 – 2012 Sustainable Seafood Program development, Kanaloa Seafoods, Inc.
1999 – 2012 Co-P.I. of 2 working groups, participant in five working groups, NCEAS, UCSB
2002 – 2004 Mentor and founding member of *Women in Science and Engineering*, UCSB
2003 – 2004 Graduate Student Advisory Committee, EEMB, UCSB