

Curriculum Vitae

MARK A. STEELE

Department of Biology
California State University
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EDUCATION

- B.A. 1989. University of California, San Diego. Major: Ecology, Behavior, and Evolution; Cum Laude
Ph.D. 1995. University of California, Santa Barbara. Biology

ACADEMIC POSITIONS

- 2007 – present Assistant Professor, Department of Biology, California State University, Northridge
2006 – 2007 Visiting Assistant Professor, Department of Biology, California State University, Northridge
2006 – present Associate Research Biologist, Marine Science Institute, University of California, Santa Barbara
2002 – 2006 Assistant Research Biologist, Marine Science Institute, University of California, Santa Barbara
2003 – present Adjunct Assistant Professor, Department of Natural Resources Science, University of Rhode Island
1998 – present Faculty, East/West Marine Biology Program, Northeastern University
2002–2003 Adjunct Assistant Professor, Department of Biological Sciences, University of Rhode Island
1999–2001 Assistant Professor (Research), Department of Biological Sciences, University of Rhode Island
2000 Lecturer, Department of Organismic Biology, Ecology and Evolution, University of California, Los Angeles
1999–2000 Postdoctoral Associate, Department of Organismic Biology, Ecology and Evolution, University of California, Los Angeles, with Rick Vance
1995–1999 Postdoctoral Associate, Department of Organismic Biology, Ecology and Evolution, University of California, Los Angeles, with Graham Forrester
1991, 1995 Research Assistant, Department of Biological Sciences, University of California, Santa Barbara
1990-1995 Teaching Assistant, Department of Biological Sciences, University of California, Santa Barbara
1987-1989 Teaching Assistant, Biology Department, University of California, San Diego

TEACHING EXPERIENCE

2008	Graduate Seminar in Ecology (Department of Biology, California State University, Northridge)
2007-present	Ichthyology (Department of Biology, California State University, Northridge)
2006-present	Marine Ecology (Department of Biology, California State University, Northridge)
2006-present	Ecology of Marine Fishes (Department of Biology, California State University, Northridge)
1998-present	Biology of Fishes (East/West Marine Biology Program, Northeastern University)
2000	Ecology (Department of Organismic Biology, Ecology and Evolution, University of California, Los Angeles)
1990-1995	Ecology; Ecology Lab; General Biology (Teaching Assistant, Department of Biological Sciences, University of California, Santa Barbara)
1987-1989	Introductory Biology; Human Nutrition (Teaching Assistant, Biology Department, University of California, San Diego)

AWARDS, FELLOWSHIPS, SCHOLARSHIPS, AND HONORS

1997	Mildred Mathias Award for best natural science proposal submitted to the UC MEXUS program
1995	UCSB General Affiliates Graduate Dissertation Fellowship
1994	Regent's Fellowship, University of California, Santa Barbara
1994	International Women's Fishing Association Scholarship
1994	Graduate Student Fee Fellowship, University of California, Santa Barbara
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1993	Graduate Student Fee Fellowship, University of California, Santa Barbara
1992	International Women's Fishing Association Scholarship
1992	Graduate Student Fee Fellowship, University of California, Santa Barbara
1991	Honorable Mention, National Science Foundation Graduate Fellowship
1990	Regent's Fellowship, University of California, Santa Barbara
1988	President's Undergraduate Fellowship, University of California, San Diego

GRANTS AND CONTRACTS

2008-2009	California Coastal Commission. San Onofre Nuclear Generating Station Mitigation Project Monitoring Program: Measuring fecundity, growth, and food-chain support of kelp forest fishes on the SONGS-mitigation artificial reef and reference reefs. \$175,670. (PI with L. Allen)
2007	California Coastal Commission. San Onofre Nuclear Generating Station Mitigation Project Monitoring Program: Measuring fecundity of five species of kelp forest fishes. \$38,920. (PI with L. Allen)
2007-2008	California Department of Fish and Game. Pilot study to monitor the occurrence of invasive species occupying rip-rap habitat in Los Angeles Harbor, California. \$47,813. (co-PI with L. Allen)
2006-2007	California Department of Fish and Game. Nearshore gill net sampling program for white seabass (age I-IV). \$95,663. (co-PI with 2 others)

- 2002-2007 National Science Foundation (OCE 0222087). A test for shelter limitation of reef fish populations at large spatial scales: an integrated empirical and theoretical approach. \$549,167. (co-PI; G. Forrester PI)
- 2004-2006 Caribbean Marine Research Center, National Undersea Research Program, National Oceanic and Atmospheric Administration (CMRC-03-NRME-01-04A). Density dependence in exploited marine fish: an experimental test and theoretical exploration of the implications for fisheries enhancement via marine protected areas. \$57,983. (PI)
- 2004-2005 California Coastal Commission. San Onofre Nuclear Generating Station Mitigation Project Monitoring Program. \$2,388,957. (co-PI with 3 others)
- 2002-2004 Caribbean Marine Research Center, National Undersea Research Program, National Oceanic and Atmospheric Administration (CMRC-01-NRME-01-02A). Source-sink dynamics, density dependence, and the efficacy of marine protected areas. \$59,028. (PI)
- 2001-2002 Caribbean Marine Research Center, National Undersea Research Program, National Oceanic and Atmospheric Administration (CMRC-01-PRGF-01-01A). Population dynamics of coral reef fishes at multiple scales: an integrated empirical and theoretical approach. \$7,475. (PI)
- 1997-2001 National Science Foundation (OCE 96-18011). Local population dynamics of temperate and tropical reef fishes at multiple scales. \$403,000. (co-author; G. Forrester PI)
- 1997-1998 UC MEXUS Grant. Assessment of artisanal fisheries of the east coast of Baja California Sur, Mexico. \$12,500. (co-author; G. Forrester PI)
- 1995 University of California Travel Grant
- 1993 Sigma Xi Grant-in Aid of Research
- 1993 Lerner-Gray Fund for Marine Research
- 1992 Sigma Xi Grant-in Aid of Research
- 1992 Lerner-Gray Fund for Marine Research

PROFESSIONAL MEMBERSHIPS

American Academy of Underwater Sciences
 American Society of Ichthyologists and Herpetologists
 California Estuarine Research Society
 Ecological Society of America
 Estuarine Research Federation
 Sigma Xi
 Southern California Academy of Sciences
 Western Society of Naturalists

PUBLICATIONS

- Samhuri, J. F., R. R. Vance, G. E. Forrester, and M. A. Steele. 2009. Musical chairs: density-dependent mortality caused by competition for unguarded refuges. *Oecologia* 160:257–265.
- Paddack, M. J., J. D. Reynolds, C. Aguilar, R. S. Appeldoorn, J. Beets, E. W. Burkett, P. M. Chittaro, K. Clarke, R. Esteves, A. C. Fonseca, G. E. Forrester, A. M. Friedlander, J. García-Sais, G. González-Sansón, L. K. B. Jordan, D. McClellan, M. W. Miller, P. P. Molloy, P. J. Mumby, I. Nagelkerken, M. Nemeth, R. Navas-Camacho, J. Pitt, N. V. C. Polunin, M. C. Reyes-Nivia, D. R. Robertson, A. Rodríguez Ramírez, E. Salas, S. R. Smith, R. E. Spieler,

- M. A. Steele, I. D. Williams, C. Wormald, A. R. Watkinson, and I. M. Côté. 2009. Recent region-wide declines in Caribbean reef fish abundance. *Current Biology* 19:590-595.
- Samhuri, J. F., M. A. Steele, and G. E. Forrester. 2009. Intercohort competition drives selective mortality and shelter-mediated density dependence in a coral reef fish. *Ecology* 90:1009–1020.
- Stier, A. C., M. A. Steele, and A. J. Brooks. 2009. Coral reef fishes use the crown-of-thorns seastar as habitat. *Coral Reefs* 28:227.
- Forrester, G. E., M. A. Steele, J. F. Samhuri, B. Evans, and R. R. Vance. 2008. Spatial density dependence scales up but does not produce temporal density dependence in a coral reef fish. *Ecology* 89:2980-2985.
- Forrester, G. E., M. A. Steele, J. F. Samhuri, and R. R. Vance. 2008. Settling reef fish discriminate among habitats at large, but not small, spatial scales. *Limnology and Oceanography* 53:1956-1962.
- Wormald, C. L. and M. A. Steele. 2008. Testing assumptions of mark-recapture theory in the coral reef fish *Lutjanus apodus*. *Journal of Fish Biology* 73:498–509.
- Williams, J. P., L. G. Allen, M. A. Steele, and D. J. Pondella. 2007. El Niño periods increase growth of juvenile white seabass (*Atractoscion nobilis*) in the Southern California Bight. *Marine Biology* 152:193–200.
- Steele, M. A., S. C. Schroeter, and H. M. Page. 2007. Preliminary investigation of the effects of purse seine size on estimates of density and species richness of estuarine fishes. *Estuaries and Coasts* 30:344–347.
- Steele, M. A., S. C. Schroeter, and H. M. Page. 2006. Experimental evaluation of biases associated with sampling estuarine fishes with seines. *Estuaries and Coasts* 29:1172-1184.
- Steele, M. A., S. C. Schroeter, R. C. Carpenter, and D. J. Kushner. 2006. Top-down vs. bottom-up effects in kelp forests. *Science* 313:1738.
- Steele, M. A., S. C. Schroeter, and H. M. Page. 2006. Sampling characteristics and biases of enclosure traps for sampling fishes in estuaries. *Estuaries and Coasts* 29:630-638.
- Forrester, G. E., B. Evans, M. A. Steele, and R. R. Vance. 2006. Assessing the magnitude of intra- and interspecific competition in two coral-reef fishes using a response surface experiment. *Oecologia* 148:632–640.
- Steele, M. A. and T. W. Anderson. 2006. Predation. In: L. G. Allen, M. H. Horn, D. J. Pondella II (eds) *Ecology of California Marine Fishes*, U.C. Press, p. 428-448.
- Steele, M. A. and G. E. Forrester. 2005. Small-scale field experiments accurately scale up to predict density dependence in reef fish populations at large scales. *Proceedings of the National Academy of Sciences* 102:13513-13516.
- Forrester, G. E. and M. A. Steele. 2004. Predators, prey refuges, and the spatial scaling of density- dependent prey mortality. *Ecology* 85:1332-1342.
- Swearer, S. E., G. E. Forrester, M. A. Steele, A. J. Brooks, and D. W. Lea. 2003. Spatio-temporal and interspecific variation in otolith trace-elemental fingerprints in a temperate estuarine fish assemblage. *Estuarine, Coastal and Shelf Science* 56:1111-1123.
- Forrester, G. E., B. I. Fredericks, D. Gerdeman, B. Evans, M. A. Steele, K. Zayed, L. E. Schweitzer, I. H. Suffet, R. R. Vance, R.F. Ambrose. 2003. Growth of estuarine fish is associated with the combined concentration of sediment contaminants and shows no adaptation of acclimation to past conditions. *Marine Environmental Research* 56:423-442.

- Steele, M. A. and G. E. Forrester. 2002. Variation in the relative importance of sublethal effects of predators and competitors on growth of a temperate reef fish. *Marine Ecology Progress Series* 237:233-245.
- Steele, M. A., J. C. Malone, A. M. Findlay, M. H. Carr, and G. E. Forrester. 2002. A simple method for estimating larval supply in reef fishes and a preliminary test of limitation of population size by larval supply in the kelp bass, *Paralabrax clathratus*. *Marine Ecology Progress Series* 235:195-203.
- Steele, M. A. and G. E. Forrester. 2002. Early post-settlement predation on three reef fishes: effects on spatial patterns of recruitment. *Ecology* 83: 1076-1091.
- Forrester, G. E., R. R. Vance, and M. A. Steele. 2002. Simulating large-scale population dynamics using small-scale data. In: P. F. Sale (ed) *Coral reef fishes: dynamics and diversity in a complex ecosystem*. Academic Press, San Diego, p 275-301.
- Forrester, G. E. and M. A. Steele. 2000. Variation in the presence and cause of density-dependent mortality in three species of reef fishes. *Ecology* 81:2416-2427.
- Malone, J. C., G. E. Forrester, and M. A. Steele. 1999. Effects of subcutaneous microtags on the growth, survival, and vulnerability to predation of small reef fishes. *Journal of Experimental Marine Biology and Ecology* 237:243-253.
- Steele, M. A. 1999. Effects of shelter and predators on reef fishes. *Journal of Experimental Marine Biology and Ecology* 233:65-79.
- Steele, M. A., G. E. Forrester, and G. R. Almany. 1998. Influences of predators and conspecifics on recruitment of a tropical and a temperate reef fish. *Marine Ecology Progress Series* 172:115-125.
- Steele, M. A. 1998. The relative importance of predation and competition in two reef fishes. *Oecologia* 115:222-232.
- Steele, M. A. 1997. Population regulation by post-settlement mortality in two temperate reef fishes. *Oecologia* 112:64-74.
- Steele, M. A. 1997. The relative importance of processes affecting recruitment of two temperate reef fishes. *Ecology* 78:129-145.
- Steele, M. A. 1996. Effects of predators on reef fishes: separating cage artifacts from effects of predation. *Journal of Experimental Marine Biology and Ecology* 198:249-267.
- Steele, M. A. 1995. The contributions of predation, competition, and recruitment to population regulation of two temperate reef fishes. Ph.D. Dissertation. University of California, Santa Barbara, California, USA.

Solicited Book Reviews

- Steele, M. A. 1998. Life and Death of Coral Reefs. *The Quarterly Review of Biology* 73:367

Papers Presented at Scientific Meetings

60 total:

30 first author: 28 talks; 2 posters

30 co-author: 27 talks; 3 posters

Invited Seminar Presentations

19 first author