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PROFESSIONAL EXPERIENCE

Department of Environmental Science, University of San Francisco
Assistant Professor, August 1999 - present

Pacific Estuarine Research Laboratory, San Diego State University
Associate Director, January 1998 - July 1999
Assistant Director, January 1996 - December 1997
Post-doctoral Fellow, July 1994 - January 1996

Department of Oceanography and Coastal Sciences, Louisiana State University
Board of Regents Graduate Fellow, August 1990 - August 1994

Department of Biology, San Francisco State University
Lecturer, Summer 1989
Teaching Assistant, September 1988 - December 1989

EDUCATION

Louisiana State University
Ph.D., Oceanography and Coastal Sciences, 1994
Dissertation: Sedimentation Processes in Selected Coastal Wetlands from the Gulf of Mexico and Northern Europe.

San Francisco State University
M.A., Biology, 1990
Thesis: The Introduction of *Spartina alterniflora* in South San Francisco Bay.

University of California, Berkeley
B.A., Biology (Marine Biology Field Major), 1985
B.A., Slavic Languages and Literature, 1985

PEER-REVIEWED PUBLICATIONS

- Callaway, J.C. In press. The challenge of restoring functioning salt marsh ecosystems. *Journal of Coastal Research*.
- Callaway, J.C., and J.B. Zedler. 2004. Restoration of urban salt marshes: Lessons from southern California. *Urban Ecosystems* 7: 107-124..
- Morzaria-Luna, H., J.C. Callaway, G. Sullivan, and J.B. Zedler,. 2004. Relationship between topographic heterogeneity and vegetation patterns in a Californian salt marsh. *Journal of Vegetation Science* 14: 523-530.

- Callaway, J.C. 2003. Restoring our national wetlands: Understanding restoration ecology. Pages 55-83 in: K. McGlothlin and S. Spray, editors. *Wetlands: Exploring Environmental Challenges: A Multidisciplinary Approach*. Rowman and Littlefield, Lanham, MD.
- Callaway, J.C., G. Sullivan, and J.B. Zedler. 2003. Species-rich plantings increase biomass and nitrogen accumulation in a wetland restoration experiment. *Ecological Applications* 13: 1626-1639.
- Ward, K.M., J.C. Callaway and J.B. Zedler. 2003. Episodic colonization of an intertidal mudflat by a native cordgrass (*Spartina foliosa*) at Tijuana Estuary. *Estuaries* 26: 116-130.
- Zedler, J.B., and J.C. Callaway. 2003. Adaptive restoration: A strategic approach for integrating research into restoration projects. Pages 163-170 in: D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania, editors. *Managing for Healthy Ecosystems*. CRC Press, Boca Raton, FL.
- Callaway, J.C. 2001. Hydrology and substrate. Pages 89-117 in: J.B. Zedler, editor. *Handbook for Restoring Tidal Wetlands*. CRC Press, Boca Raton, FL.
- Callaway, J.C., and G. Sullivan. 2001. Sustaining wetland restoration projects: Identifying and solving management problems. Pages 337-362 in: J.B. Zedler, editor. *Handbook for Restoring Tidal Wetlands*. CRC Press, Boca Raton, FL.
- Callaway, J.C., J.S. Desmond, G. Sullivan, G.D. Williams, and J.B. Zedler. 2001. Assessing the progress of restored wetlands: Hydrology, soil, plants, and animals. Pages 271-335 in: J.B. Zedler, editor. *Handbook for Restoring Tidal Wetlands*. CRC Press, Boca Raton, FL.
- Weis, D. A., J.C. Callaway, and R.M. Gersberg. 2001. Vertical accretion rates and heavy metal chronologies in wetland sediments of the Tijuana Estuary. *Estuaries* 24: 840-850.
- Zedler, J.B., and J.C. Callaway. 2001. Tidal wetland functioning. *Journal of Coastal Research Special Issue* 27: 38-64.
- Zedler, J.B., J.C. Callaway, and G. Sullivan. 2001. Declining biodiversity: Why species matter and how their functions might be restored in Californian tidal marshes. *Bioscience* 51: 1005-1017.
- Boyer, K.E., J.C. Callaway, and J.B. Zedler. 2000. Evaluating the progress of restored cordgrass (*Spartina foliosa*) marshes: Belowground biomass and tissue N. *Estuaries* 23: 711-721.
- Zedler, J.B., and J.C. Callaway. 2000. Evaluating the progress of engineered tidal wetlands. *Ecological Engineering* 15: 211-225.
- Zedler, J.B., and J.C. Callaway. 1999. Tracking wetland restoration: Do mitigation sites follow desired trajectories? *Restoration Ecology* 7: 69-73.
- Zedler, J.B., J.C. Callaway, J.S. Desmond, G. Vivian-Smith, G.D. Williams, G. Sullivan, A. Brewster, and B. Bradshaw. 1999. California salt marsh vegetation: An improved model of spatial pattern. *Ecosystems* 2: 19-35.
- Callaway, J.C., and J.B. Zedler. 1998. Interactions between a salt marsh native perennial (*Salicornia virginica*) and an exotic annual (*Polypogon monspeliensis*) under varied salinity and hydroperiod. *Wetlands Ecology and Management* 5: 179-194.
- Callaway, J.C., R.D. DeLaune, and W.H. Patrick, Jr. 1998. Heavy metal chronologies in selected coastal wetlands from northern Europe. *Marine Pollution Bulletin* 36: 82-96.
- Rybczyk, J.M., J.C. Callaway, and J.W. Day, Jr. 1998. A relative elevation model for a subsiding coastal forested wetland receiving wastewater effluent. *Ecological Modelling*

112: 23-44.

- Callaway, J.C., J.B. Zedler, and D.L. Ross. 1997. Using tidal salt marsh mesocosms to aid wetland restoration. *Restoration Ecology* 5: 135-146.
- Callaway, J.C., R.D. DeLaune, and W.H. Patrick, Jr. 1997. Sediment accretion rates from four coastal wetlands along the Gulf of Mexico. *Journal of Coastal Research* 13: 181-191.
- Haltiner, J., J.B. Zedler, K.E. Boyer, G.D. Williams, and J.C. Callaway. 1997. Influence of physical processes on the design, functioning and evolution of restored tidal wetlands in California. *Wetlands Ecology and Management* 4: 73-91.
- Nuttle, W.K., M.M. Brinson, D. Cahoon, J.C. Callaway, R.R. Christian, G.L. Chmura, W.H. Conner, R.H. Day, M. Ford, J. Grace, J.C. Lynch, R.A. Orson, R.W. Parkinson, D. Reed, J.M. Rybczyk, T.J. Smith, III, R.P. Stumpf, and K. Williams. 1997. Conserving coastal wetlands despite sea level rise. *EOS* 78: 257, 260-261.
- Callaway, J.C., R.D. DeLaune, and W.H. Patrick, Jr. 1996. Chernobyl ¹³⁷Cs used to determine sediment accretion rates at selected northern European coastal wetlands. *Limnology and Oceanography* 41: 444-450.
- Callaway, J.C., J.A. Nyman, and R.D. DeLaune. 1996. Sediment accretion in coastal wetlands: A review and a simulation model of processes. *Current Topics in Wetland Biogeochemistry* 2: 2-23.
- Callaway, J.C., and M.N. Josselyn. 1992. The introduction and spread of *Spartina alterniflora* in south San Francisco Bay. *Estuaries* 15: 218-226.

GRANTS AND CONTRACTS

- Ambrose, R. F., and Callaway, J.C. Wetland mitigation in California: Assessment of compliance with Clean Water Act Section 401(c) permits and wetland functions. State Water Resources Control Board, Division of Water Quality. June 2004 - March 2006.
- Callaway, J.C. Studies of sediment accumulation rate in Morro Bay Estuary. Subcontract from Battelle Marine Sciences Laboratory for the Morro Bay National Estuary Program. December 2003 - December 2004.
- Parker, V.T., J.C. Callaway, and M. Vasey. Influence of restoration on wetland vegetation processes in the San Francisco Estuary and Delta. CALFED Bay-Delta Science Program. September 2003 - March 2005.
- Zedler, J.B., S.P. Madon, and J.C. Callaway. Manipulation of vertical and horizontal heterogeneity in a large-scale restoration experiment. National Science Foundation. Grant # DEB 02-12005. September 2002 - August 2005.
- Callaway, J.C., V.T. Parker, and M. Vasey. West coast pilot 2002 intertidal assessment: California intensification for wetland sampling for EMAP (Environmental Monitoring and Assessment Program), EPA. Funded through the San Francisco Estuary Institute. August 2002 - January 2003.
- Callaway, J.C. Wetland sediment accretion at the restored tidal wetland, Crissy Field, Golden Gate National Recreation Area. National Parks Association. August 2000 - February 2002.
- Callaway, J.C. Modeling sediment processes in newly restored salt marshes in the Mississippi River Delta. Subcontract from Wetland Biogeochemistry Institute, Louisiana State University. August 2000 - July 2001.
- Callaway, J.C. Sediment dynamics in natural and restored wetlands of south San Francisco Bay. USF Faculty Development Funds. Fall 2000.

- Callaway, J.C. Data analysis for wetland restoration research. USF Faculty Development Funds. Fall 1999.
- Zedler, J.B., J.C. Callaway, and G. Sullivan. The role of diversity in ecosystem function. National Science Foundation. Grant # DEB 96-19875. July 1997 - June 2001.
- Callaway, J.C., J.B. Zedler, and G.D. Williams. Tijuana River National Estuarine Research Reserve Monitoring. February 1998 - January 2000.
- Ingmanson, D., J.C. Callaway, and J. Kepper. Wetland restoration by public school teachers and students. California Sea Grant Program. October 1997 - September 1999.
- Zedler, J.B., and J.C. Callaway. Impacts of non-point source pollution on the salt marsh at Tijuana Estuary. NOAA, Office of Coastal Zone Management. September 1995 - August 1996.

PRESENTATIONS

Invited Presentations and Seminars

- Callaway, J.C. 2004. The challenge of restoring California salt marshes. San Jose State University, Department of Biology. February 2004.
- Callaway, J.C. 2003. Restoration of urban salt marshes: Lessons from California. 24th Annual Meeting of Society of Wetland Scientists. New Orleans, LA. June 2003.
- Callaway, J.C. 2003. The challenge of restoring functioning salt marsh ecosystems. Restore America's Estuaries Conference. Baltimore, MD. April 2003.
- Callaway, J.C. 2003. Restoring salt marshes: The importance of plant species diversity. Humboldt Chapter of the California Native Plant Society. January 2003
- Callaway, J.C. 2002. Improving restoration evaluation through the incorporation of experiments and simulation modelling. Third Joint Meeting of the Coastal Environmental Science and Technology (CEST) Panel of the United States-Japan Cooperative Program in Natural Resources. Yokosuka, Japan. July 2002.
- Callaway, J.C. 2002. Restoring salt marshes: The importance of plant species diversity. California Botanical Society Seminar Series. Berkeley, CA. May 2002.
- Callaway, J.C. 2001. Wetland restoration in southern California: The importance of plant species diversity. U.S. Geological Service. Menlo Park, CA. February 2001.
- Callaway, J.C. 2001. The challenge of restoring functioning ecosystems. Xiamen Environmental Protection Bureau. Xiamen, China. January 2001.
- Callaway, J.C. 2000. The restoration of wetland habitats in California. University of California, Davis. Department of Environmental Science and Policy, Wetlands Ecology Class. November 2000.
- Callaway, J.C. 2000. Wetland restoration in southern California: Learning from experiments and natural disturbances. San Francisco State University, Department of Biology. April 2000.
- Callaway, J.C. 2000. Restoring wetland habitats: Lessons from southern California. Hungarian Academy of Sciences, Special Symposium on the Restoration of the Danube River. Budapest, Hungary. January 2000.
- Callaway, J.C. 1999. Restoring wetlands for endangered clapper rails and other lessons from San Diego County. San Francisco Regional Water Quality Control Board, Workshop for visitors from China. December 1999.
- Callaway, J.C. 1999. Soil concerns for the restoration of coastal salt marshes. Sixth Symposium on the Biogeochemistry of Wetlands. Fort Lauderdale, FL. July 1999.

- Callaway, J.C., G. Sullivan, G.H. Keer, and J.B. Zedler. 1999. Wetland restoration at Tijuana River National Estuarine Research Reserve: The Tidal Linkage and the Model Marsh. Southern California Academy of Science Annual Meeting. California State University, Dominguez Hills, CA. May 1999.
- Callaway, J.C. 1998. Restoration of southern California coastal wetlands: The value of experimentation. Scripps Institute of Oceanography, Ecology Seminar Series. April 1998.
- Callaway, J.C., and J.M. Rybczyk. 1997. Evaluating the effects of sea-level rise on coastal wetlands: A modeling approach. OECD Workshop on Global Climate Change and Coastal Wetlands, Fifth Symposium on the Biogeochemistry of Wetlands. Royal Holloway College, London, England. September 1997.
- Callaway, J.C. 1997. Southern California salt marshes: A restoration perspective. Wetland Soils Seminar, Department of Soil and Environmental Sciences, University of California Riverside. April 1997.
- Callaway, J.C. 1994. Sediment processes in coastal wetlands: Potential impacts of sea-level rise. Department of Biology, San Diego State University. September 1994.
- Callaway, J.C. 1991. The introduction and spread of *Spartina alterniflora* in south San Francisco Bay. Department of Oceanography and Coastal Sciences, Louisiana State University. March 1991.
- Callaway, J.C. 1990. Introduced *Spartina* spp. in San Francisco Bay. Spartina Workshop, Washington State Sea Grant. Seattle, WA. November 1990.

PROFESSIONAL ACTIVITIES

Editor, *Madroño*, California Botanical Society. 2002-2004.

Member:

- Science Strategy Team. South Bay Salt Pond Restoration Project, California State Coastal Conservancy. 2003-present.
- Science Advisory Board. Tidal Wetland Restoration for Pond A4, CH2M HILL. 2003-present.
- Technical Advisory Committee. Malibu Lagoon Restoration Plan. Heal the Bay. 2003-present.
- Science Review Panel. Advancing the Science of Estuary Restoration in Humboldt Bay Symposium, October, 2003.
- Technical Advisory Panel. Restoration and Planning Workshop for Mesopotamian Marshes. Convened by the Eden Again Project, Iraq Foundation. 2003.
- Coastal Environmental Science and Technology (CEST) Panel of the United States-Japan Cooperative Program in Natural Resources. National Oceanic and Atmospheric Administration, Washington, DC. 2002-present.
- Review Team for Land Building and Nourishment, Louisiana Coastal Area (LCA), Louisiana Comprehensive Coastwide Ecosystem Restoration Study. 2002-present.
- Technical Advisory Committee for the Tijuana Estuary Tidal Restoration Program. Tijuana River National Estuarine Research Reserve. 2002-present.
- Review team for Restoration Handbook. California Coastal Conservancy and Philp Williams and Associates. 2002-present.
- Scientific Review Panel for the proposed runway expansion at the San Francisco Airport, convened by the National Atmospheric and Oceanic Administration. 2001-2003.
- Scientific Advisory Panel for the Southern California Wetlands Recovery Project, California

State Coastal Conservancy. 1998-present.
Research Committee, Tijuana River National Estuarine Research Reserve. 1997-1999.
Board of Editors, *Madroño*, California Botanical Society. 1996-2000.
Hydrogeomorphic Assessment Team for the San Francisco Bay Area Wetlands Ecosystem Goals Project. 1996-1998.

Reviewer for:

Journals

<i>American Journal of Botany</i>	<i>Journal of Coastal Research</i>
<i>American Midland Naturalist</i>	<i>Journal of Environmental Quality</i>
<i>Canadian Journal of Botany</i>	<i>Journal of Vegetation Science</i>
<i>Ecological Applications</i>	<i>Limnology and Oceanography</i>
<i>Environmental and Experimental Botany</i>	<i>Madroño</i>
<i>Environmental Geochemistry and Health</i>	<i>Plant Ecology</i>
<i>Environmental Management</i>	<i>Restoration Ecology</i>
<i>Estuaries</i>	<i>Wetlands Ecology and Management</i>
<i>Estuarine, Coastal and Shelf Science</i>	<i>Wetlands</i>

Agencies

National Science Foundation	Keck Foundation
National Sea Grant Program	California State Coastal Conservancy
CALFED Bay-Delta Program	San Francisco Bay Conservation and Development Commission
Georgia Sea Grant Program	University of California: Coastal Environmental Quality Initiative
Hudson River Foundation	
Louisiana Sea Grant Program	

Society memberships:

Estuarine Research Federation	1989-present
Society of Wetland Scientists	1990-present
California Botanical Society	1990-present
Ecological Society of America	1991-present
Society for Ecological Restoration	1995-present