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EDUCATION:

1987 Ph.D., Oceanography, U.C. San Diego, Scripps Institution of Oceanography
1984 M.Sc., Earth Sciences, University of California, San Diego
1980 B.A., summa cum laude, Biology, Pomona College

PROFESSIONAL EXPERIENCE:

2001- pres Senior Scientist, Biology Department, Woods Hole Oceanographic Institution
1997-2002 Education Coordinator (J. Seward Johnson Chair), Biology Dept., WHOI
1992-2001 Associate Scientist (tenured 1996), Biology Department, WHOI
1988-1992 Assistant Scientist, Biology Department, WHOI
1987-1988 Postdoctoral Investigator, Ocean Engineering Department, WHOI

AWARDS, HONORS, NATIONAL AND INTERNATIONAL COMMITTEES:

2008-pres Henry L. and Grace Doherty Chair in Oceanography
2007-2008 Executive Committee Member, NSF Ridge2000
2006-2008 Steering Committee Member, NSF Ridge2000
2007-2008 Chair, East Pacific Rise Oversight Committee (Ridge2000)
2000-2006 Associate Editor, Limnology and Oceanography
2004 Arnold B. Arons Award for Excellence in Teaching, Advising, and Mentoring
2003 Visiting Professor, Université Pierre & Marie CURIE, Paris France
2002-2007 Holger W. Jannasch Chair for Excellence in Oceanography
2002-pres Member, Canada Research Chairs College of Reviewers
2002-2003 Member, NSF Steering Committee on Cabled Observatories for Time Series
1999-2000 Member, National Research Council Panel on Seafloor Observatories
1999 Member, NSF Ridge2000 organizing committee
1996-2000 Chair, InterRidge Biology Committee (International)
1995-2000 Member, InterRidge Steering Committee (International)
1995-2001 Member, NSF LARVE Coordinating Committee
1993-1997 Member, NSF RIDGE Steering Committee

CRUISE EXPERIENCE:

Chief Scientist on 11 blue-water cruises (Atlantis /DSV Alvin, Atlantis II, Kila/DSV Pices V)
Principal Investigator or participant in a total of 32 cruises since 1979.

RESEARCH INTERESTS:

Larval dispersal and settlement in flow; Population connectivity; Benthic community ecology; Deep-sea biology

PUBLICATIONS, REFEREED

- 2009 Mullineaux, L.S., F. Micheli, C.H. Peterson, H.S. Lenihan, N. Markus. Historical effects on succession : imprint of past conditions on structure of a deep-sea hydrothermal vent community. *Oecologia* 161:387-400.
- 2009 Rona, P. A., A. Seilacher, C. de Vargas, A. J. Gooday, J. M. Bernhard, S. Bowser, C. Vetriani, C. O. Wirsen, L. Mullineaux, R. Sherrell, J. F. Grassle, S. Low, R. A. Lutz. *Paleodictyon nodosum*: A living fossil on the deep-sea floor. *Deep-Sea Research II* 56: 1700-1712
- 2009 Beaulieu, S.E., Mullineaux, L.S., Adams, D.K., and Mills, S.W. Comparison of a sediment trap and plankton pump for time-series sampling of larvae near deep-sea hydrothermal vents. *Limnology and Oceanography: Methods* 7:235-248
- 2009 Metaxas, A., L.S. Mullineaux and J. Sisson. Distribution of echinoderm larvae relative to the halocline of a salt wedge. *Mar. Ecol. Prog. Ser.* 377: 157-168
- 2009 Jennings, R.M., T. M. Shank, L. S. Mullineaux, and K. M. Halanych. Assessment of the Cape Cod phylogeographic break using the bamboo worm *Clymenella torquata* reveals the role of regional water masses and dispersal . *J. Heredity* 100:86-96
- 2008 Lenihan, H.S., S.W. Mills, L.S. Mullineaux, C.H. Peterson, C.R. Fisher, F. Micheli. Biotic interactions at hydrothermal vents: recruitment inhibition by the mussel *Bathymodiolus thermophilus*. *Deep-Sea Research* 155:1707-1717.
- 2008 Strasser, C.A., L. S. Mullineaux, S. R. Thorrold. Temperature and salinity effects on elemental uptake in the shells of larval and juvenile softshell clams (*Mya arenaria*). *Mar. Ecol. Prog. Ser.* 370- 155-169.
- 2008 Tyler, P.A., S. Pendlebury, S.W. Mills, L.S. Mullineaux, K.J. Eckelbarger, M. Baker and C.M. Young. Reproduction of gastropods from vents on the East Pacific Rise and the Mid-Atlantic Ridge. *J. Shellfish Res.* 27: 107–118
- 2008 Strasser, C.A., L.S. Mullineaux and B.D. Walther. Growth rate and ontogeny effects on *Mya arenaria* shell chemistry: implications for biogeochemical studies. *J. Exp. Mar. Biol. Ecol.*, 355: 153 – 163.
- 2008 Adams, D.K. and L.S. Mullineaux. Supply of gastropod larvae to hydrothermal vents reflects transport from local larval sources. *Limnology and Oceanography* 53: 1945 – 1955.
- 2007 Strasser, C.A., S.R. Thorrold, V.R. Starczak, and L.S. Mullineaux. Laser ablation ICP-MS analysis of larval shell in softshell clams (*Mya arenaria*) poses challenges for natural tag studies. *Limnology and Oceanography Methods* 5: 241-249
- 2007 Fuchs, H., M. Neubert and L.S. Mullineaux. Effects of turbulence-mediated larval behavior on larval supply and settlement in tidal currents. *Limnol Oceanogr* 52:1156-1165
- 2007 Mills, S.W., L.S. Mullineaux and P.A. Tyler. Habitat associations in gastropod species at East Pacific Rise hydrothermal vents (9°50'N). *Biological Bulletin* 212: 185-194
- 2006 Neubert, M., L.S. Mullineaux and M.F. Hill. A metapopulation approach to interpreting diversity at deep-sea hydrothermal vents. In 'Marine Metapopulations', J. Kritzer and P. Sale, eds., Elsevier Academic Press, pp. 321-350.
- 2005 Pradillon, F., M. Zbinden, L.S. Mullineaux and F. Gaill. Effects of patch dynamics on size-structure and reproductive maturity of *Alvinella pompejana* (Polychaeta: Alvinellidae) populations. *Marine Ecology Progress Series* 302:147-157

- 2005 Mullineaux, L.S., S.W. Mills, A. K. Sweetman, A.H. Beaudreau, A. Metaxas, H.L. Hunt. Spatial structure and temporal variation in larval abundance at hydrothermal vents on the East Pacific Rise. *Marine Ecology Progress Series* 293:1-16
- 2005 Sancho, G., Fisher, C.R., Mills, S. Micheli, F., Johnson, G.A., Lenihan, H.S., Peterson, C.H and Mullineaux, L.S. Selective predation by the zoarcid fish *Thermarces cerberus* at hydrothermal vents. *Deep-Sea Research* 152: 837-844
- 2004 Fuchs, H.L., L. S. Mullineaux, and A. R. Solow. Sinking behavior of gastropod larvae (*Ilyanassa obsoleta*) in turbulence. *Limnology and Oceanography* 49: 1937-1948
- 2004 Hunt, H.L., A. Metaxas, R.M. Jennings, K.Halanych and L.S. Mullineaux. Testing biological control of colonization by vestimentiferan tubeworms at deep-sea hydrothermal vents (East Pacific Rise, 9°50'N). *Deep-Sea Research* 51: 225-234
- 2003 Mullineaux, L.S., C.H. Peterson, F. Micheli and S.W. Mills. Successional mechanism varies along a gradient in hydrothermal fluid flux at deep-sea vents. *Ecological Monographs* 73: 523-542.
- 2002 Mullineaux, L.S., K.G. Speer, A.M. Thurnherr, M.E. Maltrud, A. Vangriesheim. Implications of cross-axis flow for larval dispersal along mid-ocean ridges. *Cahiers de Biologie Marine* 43: 281-284.
- 2002 Hunt, H.L., D.A. McLean and L.S. Mullineaux. Alteration of spatial settlement patterns of the soft shell clam *Mya arenaria* by post-settlement events. *Estuaries* 26: 72-81.
- 2002 Podar, M, Mullineaux, L.S., Huang, H.-R., Perlman, P.S. and Sogin, M.L. Bacterial group II introns in a deep sea hydrothermal vent environment. *Applied and Environmental Microbiology* 68:6392-6398.
- 2002 Hunt, H.L. and L.S. Mullineaux. The roles of predation and postlarval transport in recruitment of the soft shell clam *Mya arenaria*. *Limnology & Oceanography* 47:151-164.
- 2002 Micheli, F., C.H. Peterson, L.S. Mullineaux, C. Fisher, S.W. Mills, G. Sancho, G.A. Johnson and H.S. Lenihan. Predation structures communities at deep-sea hydrothermal vents. *Ecological Monographs* 72:365-382.
- 2001 Gulmann, L.K., L.S. Mullineaux and H.L. Hunt. Effects of caging on retention of postlarval soft-shelled clams (*Mya arenaria*). *Journal of Shellfish Research*. 20: 135-142.
- 2001 Marsh, A. G., L. S. Mullineaux, C. M. Young and D. T. Manahan. 2001. Larval dispersal potential of the tubeworm *Riftia pachyptila* at deep-sea hydrothermal vents. *Nature* 411: 77-80.
- 2001 Etter, R. and L.S. Mullineaux. Deep-Sea Communities. In, Bertness, M.D., S.D. Gaines and M.E. Hay, eds., *Marine Community Ecology*, p. 367-394, Sinauer Associates Inc. Sunderland, MA.
- 2000 Mullineaux, L. S., C. R. Fisher, C. H. Peterson and S. W. Schaeffer. Vestimentiferan tubeworm succession at hydrothermal vents: use of biogenic cues to reduce habitat selection error? *Oecologia* 123:275-284.
- 1999 Berntson, E. A., S. C. France and L. S. Mullineaux. Phylogenetic relationships within the Class Anthozoa (Phylum Cnidaria) based on 18S ribosomal DNA sequence information. *Molecular Phylogenetics and Evolution* 13(2): 417-433.
- 1999 Dunn, R., L. S. Mullineaux and S. W. Mills. Resuspension of postlarval soft-shell clams

- Mya arenaria* through disturbance by the mud snail *Ilyanassa obsoleta*. *Marine Ecology Progress Series* 180:223-232.
- 1998 Kim, S.L. and L.S. Mullineaux. Distribution and near-bottom transport of larvae and other plankton at hydrothermal vents. *Deep-Sea Research II* 45: 423-440.
- 1998 Mullineaux, L.S., S.W. Mills and E. Goldman. Recruitment variation during a pilot colonization study of hydrothermal vents (9°50'N, East Pacific Rise). *Deep-Sea Research II* 45:441-464.
- 1997 Mullineaux, L.S. and S.W. Mills. A test of the larval retention hypothesis in seamount-generated flows. *Deep-Sea Research* 44: 745-770.
- 1996 France, S.C., P.E. Rosel, J. E. Agenbroad, L.S. Mullineaux, T.D. Kocher. DNA sequence variation of mitochondrial large-subunit rRNA provides support for a two subclass organization of the Anthozoa (Cnidaria). *Molecular Marine Biology and Biotechnology* 5:15-28.
- 1996 Mullineaux, L.S., S. Kim, A. Pooley and R. Lutz. Identification of Archaeogastropod larvae from a hydrothermal vent community. *Marine Biology* 124: 551-560.
- 1995 Haney, J.C., L.R. Haury, L.S. Mullineaux, C.L. Fey. Seabird aggregation at a deep North Pacific seamount. *Marine Biology* 123:1-9.
- 1995 Mullineaux, L.S. and S.C. France. Dispersal of deep-sea hydrothermal vent fauna, in S.E. Humphris, R.A. Zierenberg, L.S. Mullineaux, and R.E. Thomson, eds., *Seafloor hydrothermal systems: physical, chemical, biological, and geochemical interactions*, Geophysical Monograph Series volume 91, p. 408-424.
- 1995 Mullineaux, L.S. P.H. Wiebe and E.T. Baker. Larvae of benthic invertebrates in hydrothermal vent plumes over Juan de Fuca Ridge. *Marine Biology* 122: 585-596.
- 1995 Wishner, K.F, C.J. Ashjian, C. Gelfman, M.M. Gowing, L. Kann, L.A. Levin, L.S. Mullineaux and J. Saltzman. The lower interface of the eastern tropical pacific oxygen minimum zone. *Deep-Sea Research* 42:93-115.
- 1994 Rankin, K., L.S. Mullineaux and W.R. Geyer. Transport and deposition of juvenile gem clams (*Gemma gemma*) in a headland wake. *Estuaries* 17:655-667.
- 1994 Kim, S.L., L.S. Mullineaux and K.R. Helfrich. Larval dispersal via entrainment into hydrothermal vent plumes. *Journal of Geophysical Research* 99: 12,655-12,665.
- 1994 Mullineaux, L.S. Implications of mesoscale flows for dispersal and retention of larvae in deep-sea habitats. In: C.M. Young and K.J. Eckelbarger, eds. "*Reproduction, larval biology and recruitment of the deep-sea benthos*". Columbia University Press, p. 201-222.
- 1994 Kaartvedt, S., C.L. Van Dover, L.S. Mullineaux, P.H. Wiebe and S. Bollens. Deep-sea amphipods on a hydrothermal treadmill. *Deep-Sea Research* 41: 179-195.
- 1993 Mullineaux, L. S. and E. D. Garland. Larval recruitment in response to manipulated field flows. *Marine Biology* 116:667-683.
- 1991 Mullineaux, L. S. and C. A. Butman. Initial contact, exploration, and attachment of barnacle (*Balanus amphitrite*) cyprids settling in flow. *Marine Biology* 110: 93-103.
- 1990 Wishner, K., L. Levin, M. Gowing and L. Mullineaux. Involvement of the oxygen minimum in benthic zonation of a deep seamount. *Nature* 346: 57-59.

- 1990 Mullineaux, L. S. and C. A. Butman. Recruitment of benthic invertebrates in boundary-layer flows: a deep water experiment on Cross Seamount. *Limnol. Oceanogr.* 35: 409-423.
- 1989 Noble, M. and L. S. Mullineaux. Internal tidal currents over the summit of Cross Seamount. *Deep-Sea Research* 36:1791-1802.
- 1989 Mullineaux, L. S. Vertical distributions of the epifauna on manganese nodules: implications for feeding and settlement in flow. *Limnol. Oceanogr.* 34(7): 1247-1262.
- 1988 Mullineaux, L. S. The role of initial settlement in structuring a hard-substratum community in the deep sea. *J. Exp. Mar. Biol. Ecol.* 120: 247-261.
- 1988 Mullineaux, L. S. Taxonomic notes on large, mat-like foraminifers encrusting manganese nodules, including the description of a new genus, *Chondrodapis* (Komokiacea). *J. Foram. Res.* 18: 46-53.
- 1987 Mullineaux, L. S. Organisms encrusting manganese nodules and crusts: distribution and abundance at three North Pacific sites. *Deep-Sea Res.* 34: 165-184.
- 1986 Mullineaux, L. S. and M. J. Westberg-Smith. Radiolarians as paleoceanographic indicators in the Miocene Monterey Formation, Newport Beach, California. *Micropaleontology* 32: 48-71.
- 1984 Mullineaux, L. S. and T. E. DeLaca. Distribution of Antarctic benthic foraminifers settling on the pecten *Adamusium colbeckii*. *Polar Biol.* 3: 185-189.
- 1981 Mullineaux, L. S. and G. P. Lohmann. Late Quaternary stagnations and recirculation of the eastern Mediterranean: changes in the deep water recorded by fossil benthic foraminifers. *Jour. Foram. Res.* 11: 20-39.

SUBMITTED:

McGillicuddy, D.J., J.W. Lavelle, A.M. Thurnherr, V.K. Kosnyrev, L.S. Mullineaux. Larval dispersion along an axially symmetric mid-ocean ridge. *Deep-Sea Res.*, submitted

Mullineaux, L.S., D.K. Adams, S.W. Mills, S.E. Beaulieu. Larvae from afar colonize deep-sea hydrothermal vents after a catastrophic eruption. *Ecology Letters*, submitted

Adams, D.K., S.W. Mills, T.M. Shank, L.S. Mullineaux. Expanding dispersal studies at hydrothermal vents through species identification of cryptic larval forms. *Marine Biology*, submitted

White, M.M., C.A. Strasser, L.S. Mullineaux Spatial and temporal variations in trace elemental signatures of juvenile soft-shell clams (*Mya arenaria*). *Estuarine, Coastal and Shelf Research*, submitted.

Fuchs, H. L., A. R. Solow, and L. S. Mullineaux. Larvae from different adult habitats have genus-specific responses to turbulence in a tidal channel. *Ecological Monographs* (in revision).

BOOKS, THESES:

- 2000 Committee on Seafloor Observatories. Illuminating the hidden planet: the future of seafloor observatory science. National Academy Press, Washington, D.C. 135 pp.
- 1998 Smith, C.R., L.S. Mullineaux and L.A. Levin, eds., Deep-Sea Biodiversity: a compilation of recent advances in honor of Robert R. Hessler. Deep-Sea Research II volume 45, 567 pp.
- 1995 Humphris, S.E., R.A. Zierenberg, L.S. Mullineaux, and R.E. Thomson, eds., Seafloor hydrothermal systems: physical, chemical, biological, and geochemical interactions, Geophysical Monograph Series volume 91, 466 pp.
- 1987 Mullineaux, L. S. The epifaunal communities of manganese nodules. Ph.D. dissertation, Scripps Institution of Oceanography, 224 pp.
- 1984 Mullineaux, L. S. Radiolarians as paleoceanographic indicators in the Monterey Formation. M.Sc. dissertation, University of California, San Diego, 62 pp.

REPORTS, ARTICLES

- 2009 Mills, S. W., S. E. Beaulieu, and L. S. Mullineaux. Photographic identification guide to larvae at hydrothermal vents. Woods Hole Oceanog. Inst. Tech. Rept. WHOI-2009-05.
- 2004 Mullineaux, L. S. and S. W. Mills. Coral gardens in the dark depths. *Oceanus* 42 (2). <http://oceanusmag.who.edu/v43n2/mullineaux.html>
- 2002 Mullineaux L. and D. Manahan. Larval biology, dispersal and gene flow at hydrothermal vents: Report from the LARVE Results Symposium. Ridge Meeting Report May 2001. 57 pp.
- 2000 Mullineaux, L. Biology Working Group Update. *InterRidge News* 9(1), p. 12.
- 1999 Mullineaux, L. Biology Working Group Update. *InterRidge News* 8(2), p. 10.
- 1999 Mullineaux, L.S., Dunn, R., S.W. Mills, H.L. Hunt and L.K. Gulmann. Biological influences on transport of postlarval soft-shell clams (*Mya arenaria*). In: Coastal Ocean Processes Symposium: a Tribute to William D. Grant, Woods Hole Oceanog. Inst. Tech. Rept. WHOI-99-04, pp. 155-162
- 1999 Mullineaux, L. and D. Manahan, Deep-Sea Diaspora: the LARVE project explores how species migrate from vent to vent. *Oceanus* 41:6-9.
- 1998 Mullineaux, L., A Tribute to Holger Jannasch, 1927-1998. *InterRidge News* 7.2 (Fall 1998).
- 1998 Mullineaux, L.S, S. K. Juniper, D. Desbruyères and M. Cannat. Steps proposed to resolve potential research conflicts at deep-sea hydrothermal vents. *EOS, Transactions of the American Geophysical Union* 79(44): 533-538.
- 1998 Mullineaux, L.S., Recent Progress on Facilitating International Exchange of Biological Samples. *InterRidge News* 7.1 (April 1998)
- 1998 Mullineaux, L.S., Desbruyères, D. and Juniper, S.K., Deep-Sea Hydrothermal Vents Reserves: A Position Paper. *InterRidge News* 7.1 (April 1998)

- 1998 Smith, C.R., L.A. Levin and L.S. Mullineaux. Deep-sea biodiversity: a tribute to Robert R. Hessler. *Deep-Sea Research II* 45: 1-11.
- 1997 Mullineaux, L.S. Update on InterRidge Biology Working Group activities. *InterRidge News* 6.1 (April 1997)
- 1996 Mullineaux, L.S. Colonization of hydrothermal vents near 9N50 East Pacific Rise: a cruise report from Block Party 1, 2 & 3. *InterRidge News* 5.2 (November 1996).
- 1992 Garland, E. D. and L. S. Mullineaux. Particle contact on flat plates in flow: a model for initial larval contact. WHOI Technical Report 92-26.
- 1991 Mullineaux, L. S., P. H. Wiebe and E. T. Baker. Hydrothermal Vent Plumes: Larval Highways in the Deep Sea? *Oceanus* 34: 64-68.
- 1988 Mullineaux, L. S., C. A. Butman and C. F. Fuller. Effects of boundary-layer flow on the settlement of organisms onto flat plates: preliminary results from Cross Seamount. In: M. P. DeLuca and I. Babb (eds.), *Global Venting, Midwater, and Benthic Ecological Processes*, National Undersea Research Program Research Report 88-4: 251-264.
- 1985 Mullineaux, L. Organisms encrusting manganese crusts. Report prepared for Manganese Crust Environmental Statement Project. Honolulu, Hawaii.
- 1984 Newhall, C. W., D. Dzurisin and L. S. Mullineaux. Historical unrest at large calderas of the world. *Proceedings of Redbook Conference*, USGS Open File Report 84-939: 714-742.

OUTREACH ARTICLES

- 2009 LADDER to understanding dispersal at vents. *Oceanus* article on the LADDER project (in revision)
- 2009 Generations of Summer Student Fellows. *Oceanus* article on multiple generations of Summer Student Fellows, featuring Gar Secrist and Lauren Mullineaux (in preparation)
- 2009 A Diversity of Geoscientists. *Oceanus* article featuring PEP student Adrienne George (<http://www.whoi.edu/oceanus/viewArticle.do?id=58967§ionid=1002>)