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Birth: 6 December 1951, Auburn, New York

Undergraduate education: St. Bonaventure University, Biology - B.S., 1973.

Graduate education: University of Minnesota, Ecology and Behavioral Biology - Ph.D., 1977 (advisor: J. Shapiro).

Areas of Interest and Research: The integration of cell biology, development, genetics, ecology, and evolution; quantitative genetics; molecular, genomic, and phenotypic evolution.

Professional Activities:

Distinguished Professor, Indiana University, 2005 – present.
 IU Center for Genomics and Bioinformatics Associated Investigator, 2007 – present.
 Professor, Biology, Indiana University, 2001 – 2004.
 Senior Fellow and Member of Advisory Board, Indiana Molecular Biology Institute, 2001 – present.

Professor, Biology, University of Oregon, 1989 – 2001.
 Director, Ecology and Evolution Program, Univ. of Oregon, 1989 – 1993, 1996 – 2000.
 Asst., Assoc., Full Professor, Ecology, Ethology, and Evolution; University of Illinois, 1977 – 1989.

Co-director, NSF IGERT Training Grant in Evolution, Development, and Genomics, 1999 – 2004.
 Director, NSF Genetic Mechanisms of Evolution Training Grant, 1990 – 2000.

President, Society for Molecular Biology and Evolution, 2009.
 President, American Genetic Association, 2007.
 President, Society for the Study of Evolution, 2000.
 Vice-president, Society for the Study of Evolution, 1994.
 Council Member, Society for the Study of Evolution, 1991 – 1993.
 Council Member, Society of Molecular Biology and Evolution, 2005 – 2007.

Board of Scientific Counselors, National Center for Biotechnology Information (NCBI), 2008 – 2012.
 External Advisory Board, Cornell Center for Comparative and Population Genomics, 2010 -- .

Associate Editor, Genome Biology and Evolution, 2008 – present.
 Associate Editor, Genetics, 1992 – 1996.
 Associate Editor, Conservation Genetics, 1999 – present.
 Associate Editor, Molecular Ecology, 1991 – 1997.
 Associate Editor, Evolution, 1988 – 1990.

Candidate for Chair of Amer. Assoc. Advan. Sci., Biological Sciences Section G (pending election).

Member, NRC/NAS Ecosystems Panel, 1997.
 Member, NRC/NAS Committee on Scientific Issues in the Endangered Species Act, 1993 – 1995.

Member, Advisory Board for Extended Workshop, Evolutionary Perspectives on Mechanisms of Cellular Organization, Kavli Institute for Theoretical Physics, 2010.

Member, Organizing Committee, FASEB Ciliate Molecular Genetics Meeting, 2009.

NESCent Working Group on Human Evolution, 2007 – 2009.

Member, Oversight Committee for Sequencing of the *Daphnia pulex* Genome, 2003 – present.

Member, Genetics Advisory Team, Oregon Department of Fish and Wildlife, 1990 – 2001.

Organizer, Symposium on Quantitative Genetics of Natural Populations, Raleigh, NC, 1987.

Instructor, Itasca Field Station, University of Minnesota, Ecological Genetics course, 1987.

Co-founder, Midwest Population Biology Conference (with J. Emlen); Chair, 1979, 1983 meetings.

Chair, NIH Genetic Variation and Evolution Study Section, 2009 – 2010.

Panel Member, NIH Genetic Variation and Evolution Study Section, 2004 – present.

Panel Member, NIH Genome Study Section, 1999.

Panel Member, NIH Quantitative Genetics Study Section, 1998.

Ad hoc Panel Member, NIH Genetics Study Section, 1990, 1997 – 2002.

Panel Member, NSF Eukaryotic Genetics / Genes and Genomes Panel, 2001 – present.

Panel Member, NSF Advancing Theory in Biology, 2010.

Panel Member, NSF Frontiers for Integrative Research, 2003.

Panel Member, NSF IGERT Program, 2000, 2001.

Advisory Panel Member, NSF Division of Environmental Biology, 1999.

Panel Member, NSF Population Biology Panel, 1987 – 1988, 1998.

Panel Member, NSF Research Training Group Program, BBS, 1990.

Panel Member, NSF Program on Conservation Biology, 1990.

Professional Societies:

American Association for the Advancement of Science

American Genetic Association

Genetics Society of America

Society for Molecular Biology and Evolution

Society for the Study of Evolution

Recognition:

Member, US National Academy of Sciences – 2009.

Fellow, American Academy of Arts and Sciences – 2002.

Fellow, American Association for the Advancement of Science – 1998.

Fellow, Max Planck Institut für Limnologie, Plön, West Germany – 1982, 1984, 1985.

Beckman Fellow, Center for Advanced Study, Univ. of Illinois – 1981.

List of Excellent Instructors, Univ. of Illinois – Limnology, 1978, 1982; Population Biology, 1988.

Univ. of Illinois Faculty Summer Fellowship, 1978.

Current Support:

National Institutes of Health, R01GM036827, 2006-2010, The Rate and Molecular Spectrum of Spontaneous Mutations, \$2,704,000 (with W. Kelley Thomas, University of New Hampshire).

National Science Foundation, EF-0827411, 2008-2011, The Evolution of Gene and Genome Architecture, \$830,000.

National Science Foundation, MCB-1003973, 2010-2012, Genetic Mechanisms of Meiosis Suppression, \$300,000.

National Science Foundation, EF-0328516, 2003-2008, FIBR Grant: The Causes and Consequences of Recombination, \$5,000,000 (with eight other coPIs) (in no-cost extension).

US Department of Army, ONRBAA10-002, Bacterial Genome Instability, \$6,300,000 (with Pat Foster, Haixu Tang, and Steven Finkel).

Marie Curie International Research Staff Exchange, Ciliates as Natural Reservoirs of Potentially Pathogenic Bacteria (PI: Giulio Petroni, Univ. of Pisa).

Publications:

Lynch, M. 1974. The phytoplankton of the Allegheny Reservoir from May 1972 to September 1973. *Science Studies* (St. Bonaventure University) 30: 5-29.

Shapiro, J., V. Lamarra, and Lynch, M. 1975. Biomanipulation: An ecosystem approach to lake restoration, pp. 85-96. In P. L. Brezonik and J. L. Fox (eds.) *Water Quality Management Through Biological Control*. Proc. Symp. Univ. Florida.

Lynch, M. 1977. Zooplankton competition and plankton community structure. *Limnology and Oceanography* 22: 775-777.

Lynch, M. 1977. Fitness and optimal body size in zooplankton populations. *Ecology* 58: 763-774.

Lynch, M. 1978. Complex interactions between natural coexploiters - *Daphnia* and *Ceriodaphnia*. *Ecology* 59: 552-564.

Lynch, M. 1979. Predation, competition, and zooplankton community structure: An experimental study. *Limnology and Oceanography* 24: 253-272.

Lynch, M. 1980. The evolution of cladoceran life histories. *Quarterly Review of Biology* 55: 23-42.

Lynch, M. 1980. Predation, enrichment, and the evolution of cladoceran life histories: A theoretical approach. In W. C. Kerfoot (ed.) *The Evolution and Ecology of Zooplankton Communities*. American Society of Limnology and Oceanography Special Symposium No. 3: 367-376.

Lynch, M. 1980. *Aphanizomenon* blooms: Alternate control and cultivation by *Daphnia pulex*. In W.C. Kerfoot (ed.) *The Evolution and Ecology of Zooplankton Communities*. American Society of Limnology and Oceanography Special Symposium No. 3: 299-304.

Lynch, M., and J. Shapiro. 1981. Predation, enrichment, and phytoplankton community structure. *Limnology and Oceanography* 26: 86-102.

Lynch, M., B. Monson, M. Sandheinrich, and L. Weider. 1981. Patterns of size-specific mortality in zooplankton populations. *Verh. Internat. Verein. Limnol.* 21: 363-368.

Lynch, M. 1982. How well does the Edmondson-Paloheimo model approximate instantaneous birth rates? *Ecology* 63: 12-18.

Lynch, M. 1983. Ecological genetics of *Daphnia pulex*. *Evolution* 37: 358-374.

Weis, A., P. Price, and M. Lynch. 1983. Selection for clutch size in the gall-maker *Asteromyia carbonifera*. *Ecology* 64: 688-695.

- Lynch, M. 1983. Estimation of size-specific mortality rates in zooplankton populations by periodic sampling. *Limnology and Oceanography* 28: 533-545.
- Lynch, M., and R. Ennis. 1983. Resource availability, maternal effects, and longevity. *Exper. Gerontology* 18: 147-165.
- Lynch, M., and W. Gabriel. 1983. Phenotypic evolution and parthenogenesis. *American Naturalist* 122: 745-764.
- Lynch, M. 1984. The genetic structure of a cyclical parthenogen. *Evolution* 38: 186-203.
- Lynch, M. 1984. The limits to life history evolution in *Daphnia*. *Evolution* 38: 465-482.
- Lynch, M. 1984. Destabilizing hybridization, general-purpose genotypes, and geographic parthenogenesis. *Quarterly Review of Biology* 59: 257-290.
- Lynch, M. 1984. The selective value of alleles underlying polygenic traits. *Genetics* 108: 1021-1033.
- Lynch, M. 1985. Elements of a mechanistic theory for the life history consequences of food limitation. *Ergeb. Limnol.* 21: 351-362.
- Lynch, M. 1985. Speciation in the Cladocera. *Verh. Internat. Verein. Limnol.* 22: 3116-3123.
- Lynch, M. 1985. Spontaneous mutations for life history characters in an obligate parthenogen. *Evolution* 39: 804-818.
- Lynch, M., L. Weider, and W. Lampert. 1986. Measurement of the carbon balance in *Daphnia*. *Limnology and Oceanography* 31: 17-33.
- Lynch, M. 1986. Random drift, uniform selection, and the degree of population differentiation. *Evolution* 40: 640-643.
- Lynch, M., and W. G. Hill. 1986. Phenotypic evolution by neutral mutation. *Evolution* 40: 915-935.
- Lynch, M. 1987. The consequences of fluctuating selection for isozyme polymorphisms in *Daphnia*. *Genetics* 115: 657-669.
- Lynch, M., and W. Gabriel. 1987. Environmental tolerance. *American Naturalist* 129: 283-303.
- Lynch, M., and W. Gabriel. 1987. Evolution of breadth of biochemical adaptation, pp. 67-83. In P. Calow (ed.) *Evolutionary Physiological Ecology*. Cambridge Univ. Press, Cambridge, UK.
- Kerfoot, W. C., and M. Lynch. 1987. Branchiopod communities: associations with planktivorous fish in space and time, pp. 367-378. In W.C. Kerfoot and A. Sih (eds.) *Predation*. Univ. Press New England, Hanover, NH.
- Lynch, M. 1987. The evolution of intrafamilial interactions. *Proc. Natl. Acad. Sci. USA* 84: 8507-8511.
- Lynch, M. 1988. The rate of polygenic mutation. *Genetical Research* 51: 137-148.
- Lynch, M. 1988. The divergence of neutral quantitative characters among partially isolated populations. *Evolution* 42: 455-466.
- Lynch, M. 1988. Path analysis of ontogenetic data, pp. 29-46. In L. Persson and B. Ebenman (eds.) *The Dynamics of Size-structured Populations*. Springer-Verlag.

- Lynch, M., and S. J. Arnold. 1988. Measurement of selection on size and growth, pp. 47-59 In L. Persson and B. Ebenman (eds.) *The Dynamics of Size-structured Populations*. Springer-Verlag.
- Lynch, M. 1988. Estimation of relatedness by DNA fingerprinting. *Mol. Biol. Evol.* 5: 584-599.
- Lynch, M. 1988. Design and analysis of experiments on random drift and inbreeding. *Genetics* 120: 791-807.
- Lynch, M. 1989. Phylogenetic hypotheses under the assumption of neutral quantitative genetic variation. *Evolution* 43: 1-17.
- Lynch, M., K. Spitze, and T. Crease. 1989. The distribution of life history variation in *Daphnia pulex*. *Evolution* 43: 1724-1736.
- Lynch, M. 1989. The life history consequences of resource depression in *Daphnia pulex*. *Ecology* 70: 246-256.
- Lynch, M. 1990. The rate of morphological evolution in mammals from the standpoint of the neutral expectation. *American Naturalist* 136: 727-741.
- Lynch, M., and T. Crease. 1990. The analysis of population survey data on DNA sequence variation. *Mol. Biol. Evol.* 7: 377-394.
- Crease, T., M. Lynch, and K. Spitze. 1990. A hierarchical analysis of population genetic variation in nuclear and mitochondrial genes in *Daphnia*. *Mol. Biol. Evol.* 7: 444-458.
- Lynch, M. 1990. The similarity index and DNA fingerprinting. *Mol. Biol. Evol.* 7: 478-484.
- Lynch, M., and W. Gabriel. 1990. Mutation load and the survival of small populations. *Evolution* 44: 1725-1737.
- Gabriel, W., R. Bürger, and M. Lynch. 1991. Population extinction by mutational load and demographic stochasticity, pp. 49-59. In A. Seitz, and V. Loeschcke (eds.) *Species Conservation: a Population Biological Approach*. Birkhäuser Verlag, Basel.
- Lynch, M. 1991. Methods for the analysis of comparative data in evolutionary biology. *Evolution* 45: 1065-1080.
- Lynch, M. 1991. The genetic interpretation of inbreeding depression and outbreeding depression. *Evolution* 45: 622-629.
- Lynch, M. 1991. Analysis of population genetic structure by DNA fingerprinting, pp. 113-126. In T. Burke, G. Dolf, A. J. Jeffreys, and R. Wolff (eds.) *DNA Fingerprinting: Approaches and Applications*. Birkhäuser Verlag, Basel.
- Crease, T. J., and M. Lynch. 1991. Ribosomal DNA variation in *Daphnia pulex*. *Mol. Biol. Evol.* 8: 620-640.
- Spitze, K., J. Burnson, and M. Lynch. 1991. The covariance structure of life history characters in *Daphnia pulex*. *Evolution* 45: 1081-1090.
- Lynch, M., W. Gabriel, and A. M. Wood. 1991. The adaptive and demographic response of plankton populations to environmental change. *Limnol. Oceanogr.* 36: 1301-1312.
- Cohen, J. E., M. Lynch, and C. E. Taylor. 1991. Forensic DNA tests and Hardy-Weinberg equilibrium. *Science* 253: 1037.
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- Gabriel, W., and M. Lynch. 1992. The selective advantage of reaction norms for environmental tolerance. *J. Evol. Biol.* 5: 41-59.
- Lynch, M., and R. Lande. 1993. Evolution and extinction in response to environmental change, pp. 234-250. In P. Kareiva, J. Kingsolver, and R. Huey (eds.) *Biotic Interactions and Global Change*. Sinauer Assocs., Inc. Sunderland, MA.
- Lynch, R. Bürger, D. Butcher, and W. Gabriel. 1993. Mutational meltdowns in asexual populations. *J. Heredity* 84: 339-344.
- Lynch, M., and P. Jerrol. 1993. A method for calibrating molecular clocks and its application to animal mitochondrial DNA. *Genetics* 135: 1197-1208.
- Lynch, M., and K. Spitze. 1994. Evolutionary genetics of *Daphnia*, pp. 109-128. In L. Real (ed.) *Ecological Genetics*. Princeton Univ. Press.
- Lynch, M. 1994. The neutral theory of phenotypic evolution, pp. 86-108. In L. Real (ed.) *Ecological Genetics*. Princeton Univ. Press.
- Gabriel, W., M. Lynch, and R. Bürger. 1994. Muller's ratchet and mutational meltdowns. *Evolution* 47: 1744-1757.
- Lynch, M., and B. Milligan. 1994. Analysis of population-genetic structure using RAPD markers. *Molecular Ecology* 3: 91-99.
- Bürger, R., and M. Lynch. 1994. Evolution and extinction in a changing environment: a quantitative-genetic analysis. *Evolution* 49: 151-163.
- Lynch, M., and H. W. Deng. 1994. Genetic slippage in response to sex. *American Naturalist* 144: 242-261.
- Toline, C. A., and M. Lynch. 1994. Mutational divergence of life-history traits in an obligate parthenogen. *Genome* 37: 33-35.
- Avise, J. C., S. M. Haig, O. A. Ryder, M. Lynch, and C. J. Geyer. 1995. Descriptive genetic studies: applications in population management and conservation biology, pp. 183-244. In J. D. Ballou, M. Gilpin, and T. J. Foose (eds.) *Population Management for Survival and Recovery*. Columbia Univ. Press, New York.
- Conery, J. S., M. Lynch, and T. Hovland. 1995. Irregular computations on SIMD machines: a case study. *Proc. 5th Symp. Frontiers of Massively Parallel Computation*: 222-230.
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- Lynch, M., J. Conery, and R. Bürger. 1995. Mutational meltdowns in sexual populations. *Evolution* 49: 1067-1080.
- Lynch, M., J. Conery, and R. Bürger. 1995. Mutation accumulation and the extinction of small populations. *American Naturalist* 146: 489-518.
- Lynch, M. 1996. A quantitative-genetic perspective on conservation issues, pp. 471-501. In J. Avise and J. Hamrick (eds.) *Conservation Genetics: Case Histories from Nature*. Chapman and Hall, New York.
- Lynch, M. 1996. Mutation accumulation in transfer RNAs: molecular evidence for Muller's ratchet in mitochondrial genomes. *Mol. Biol. Evol.* 13: 209-220.
- Deng, H.-W., and M. Lynch. 1996. Change of genetic architecture in response to sex. *Genetics* 143: 203-212.

- Deng, H.-W., and M. Lynch. 1996. Estimation of deleterious-mutation parameters in natural populations. *Genetics* 144: 349-360.
- Houle, D., R. Morikawa, and M. Lynch. 1996. Comparing mutational variabilities. *Genetics* 143: 1467-1483.
- Kibota, T., and M. Lynch. 1996. Estimate of the genomic mutation rate deleterious to overall fitness in *Escherichia coli*. *Nature* 381: 694-696.
- Crease, T., S. K. Sung, S. L. Sung, N. Lehman, K. Spitze, and M. Lynch. 1997. Allozyme and mitochondrial DNA variation in populations of the *Daphnia pulex* complex from both sides of the Rocky Mountains. *Heredity* 79: 242-251.
- Deng, H.-W., and M. Lynch. 1997. Inbreeding depression and inferred deleterious mutation parameters in *Daphnia*. *Genetics* 147: 147-155.
- Lynch, M. 1997. Mutation accumulation in nuclear, organelle, and prokaryotic genomes: transfer RNA genes. *Mol. Biol. Evol.* 14: 914-925.
- Schultz, S. T., and M. Lynch. 1997. Deleterious mutation and extinction: effects of variable mutational effects, synergistic epistasis, beneficial mutations, and degree of outcrossing. *Evolution* 51: 1363-1371.
- Bürger, R., and M. Lynch. 1997. Adaptation and extinction in changing environments, pp. 209-240. In R. Bijlsma and V. Loeschcke (eds.) *Environmental Stress, Adaptation and Evolution*. Birkhäuser Verlag, Basel.
- Lynch, M., and J. Blanchard. 1998. Deleterious mutation accumulation in organelle genomes. *Genetica* 102/103: 29-39.
- Deng, H.-W., Y.-X. Fu, and Lynch, M. 1998. Inferring the major genomic mode of dominance and overdominance. *Genetica* 102/103: 559-567.
- Lynch, M., and R. Lande. 1998. The critical effective size for a genetically secure population. *Anim. Cons.* 1: 70-72.
- Lynch, M., L. Latta, J. Hicks, and M. Giorgianni. 1998. Mutation, selection, and the maintenance of life-history variation in a natural population. *Evolution* 52: 727-733.
- Vassilieva, L., and M. Lynch. 1999. Accumulation of spontaneous mutations in *Caenorhabditis elegans*. *Genetics* 151: 119-129.
- Lynch, M., M. Pfrender, K. Spitze, N. Lehman, D. Allen, J. Hicks, L. Latta, M. Ottene, F. Bogue, and J. Colbourne. 1999. The quantitative and molecular genetic architecture of subdivided species. *Evolution* 53: 100-110.
- Lynch, M., and K. Ritland. 1999. Estimation of relatedness with molecular markers. *Genetics* 152: 1753-1766.
- Lynch, M. 1999. The age and relationships of the major animal phyla. *Evolution* 53: 319-325.
- Force, A., M. Lynch, B. Pickett, A. Amores, Y.-L. Yan, and J. Postlethwait. 1999. Preservation of duplicate genes by complementary, degenerative mutations. *Genetics* 151: 1531-1545.
- Lynch, M., J. Blanchard, D. Houle, T. Kibota, S. Schultz, L. Vassilieva, and J. Willis. 1999. Spontaneous deleterious mutation. *Evolution* 53: 645-663.
- Conery, J. S., and M. Lynch. 1999. Genetic simulation library. *Bioinformatics* 15: 85-86.
- Lynch, M. 1999. Estimation of genetic correlations in natural populations. *Genetical Research* 74: 255-264.

- Schultz, S. T., M. Lynch, and J. H. Willis. 1999. Spontaneous deleterious mutation in *Arabidopsis*. Proc. Natl. Acad. Sci. USA 96: 11393-11398.
- Lynch, M., and A. Force. 2000. The probability of duplicate-gene preservation by subfunctionalization. Genetics 154: 459-473.
- Vassilieva, L., A. M. Hook, and M. Lynch. 2000. The fitness effects of spontaneous mutations in *Caenorhabditis elegans*. Evolution 54: 1234-1246.
- Blanchard, J., and M. Lynch. 2000. Why do mitochondrial genes end up in the nuclear genome? Trends in Genetics 16: 315-320.
- Denver, D., K. Morris, M. Lynch, L. L. Vassilieva, and W. K. Thomas. 2000. High direct estimate of the mutation rate in the mitochondrial genome of *C. elegans*. Science 289: 2342-2344.
- Pfrender, M. E., and M. Lynch. 2000. Quantitative genetic variation in *Daphnia*: temporal changes in genetic architecture. Evolution 54: 1502-1509.
- Lynch, M., and A. Force. 2000. Gene duplication and the origin of interspecific genomic incompatibility. American Naturalist 156: 590-605.
- Pfrender, M. E., K. Spitze, J. Hicks, K. Morgan, L. Latta, and M. Lynch. 2000. Lack of concordance between genetic diversity estimates at the molecular and quantitative-trait levels. Conservation Genetics 1: 263-269.
- Lynch, M., and J. S. Conery. 2000. The evolutionary fate and consequences of duplicate genes. Science 290: 1151-1154.
- Lynch, M. 2000. The limits to knowledge in quantitative genetics. Evol. Biol. 32: 225-237.
- Lynch, M., and J. S. Conery. 2001. Gene duplication and evolution: response to Long and Thornton and Zhang et al. Science 293: 1551a.
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- Lynch, M. 2001. The molecular natural history of the human genome. Trends in Ecology and Evolution 16: 420-422.
- Lynch, M., and M. O'Hely. 2001. Supplementation and the genetic fitness of natural populations. Conservation Genetics 2: 363-378.
- Lynch, M., M. O'Hely, B. Walsh, and A. Force. 2001. The probability of fixation of a newly arisen gene duplicate. Genetics 159: 1789-1804.
- Lynch, M. 2002. Intron evolution as a population-genetic process. Proc. Natl. Acad. Sci. USA 99: 6118-6123.
- Lynch, M., and A. Richardson. 2002. The evolution of spliceosomal introns. Curr. Opin. Gen. Devel. 12: 701-710.
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- Lynch, M., and A. Kewalramani. 2003. Messenger RNA processing and the evolutionary proliferation of introns. *Mol. Biol. Evol.* 20: 563-571.
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- Estes, S., and M. Lynch. 2003. Rapid recovery of mutation-accumulation lines by compensatory mutation. *Evolution* 57: 1022-1030.
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- Denver, D. R., S. L. Swenson, and M. Lynch. 2003. An evolutionary analysis of the helix-hairpin-helix superfamily of DNA repair glycosylases. *Molecular Biology and Evolution* 20: 1603-1611.
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Books:

Lynch, M. 2007. *The Origins of Genome Architecture*. Sinauer Assocs., Inc., Sunderland, MA.

Lynch, M., and J. B. Walsh. 1998. *Genetics and Analysis of Quantitative Traits*. Sinauer Assocs., Inc., Sunderland, MA.

With 14 other committee members, for the National Research Council. 1995. *Science and the Endangered Species Act*. National Academy Press, Washington, DC.

Walsh, J. B., and M. Lynch. *Evolution of Quantitative Traits*. Sinauer Assocs., Inc., Sunderland, MA (in prep.)

Lynch, M. *Mutation, Evolution, and Extinction*. Princeton Univ. Press (in prep.)

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Ph. D. students (current and former): Matthew Ackerman, Desiree Allen, Elizabeth Bohuski, Jennifer Britt, David Butcher, Hong-Wen Deng, Suzanne Estes, Allan Force, Vaishali Katju, Travis Kibota, Britt Koskella, Wenli Li, Casey McGrath, Samuel Miller, Kendall Morgan, Angela Omilian, Susanne Paland, Michael Pfrender, Aaron Richardson, Sarah Schaack, Margaret Snoke, Barry Sullender, Ken Spitze, Michael Vanni, Lawrence Weider.

Masters students (current and former): Deborah Allen, Gary Henderson, Justin Hicks, Xin Hong, Micah Jordan, Scott Kolpak, Leigh Latta, Lisa Nass, Kevin Simonelic, Hui-Hua Sun, Anna Toline.

Speaking Engagements (since 1995):

1995, National Marine Fisheries Service, Symposium on Genetic Issues in Salmonid Hatcheries.
 1995, Pennsylvania State University.
 1995, Arizona State University.
 1995, Kellogg Biological Station, Eminent Ecologist Lectures.
 1995, Duke University.
 1995, University of Chicago.
 1996, University of Alaska.
 1996, North American Forestry Genetics Association.
 1996, University of British Columbia.
 1996, National Marine Fisheries Service, Symposium on Risk Analysis in Salmonids.
 1997, Special Symposium on Inbreeding and Outbreeding in Salmonids, Juneau.
 1997, University of Michigan.
 1997, University of Arizona.
 1997, Environmental Mutagen Society, Symposium Speaker, Minneapolis.
 1997, University of Minnesota.
 1997, University of Maryland, Symposium on Small Populations.
 1997, Society for the Study of Evolution, Symposium on Deleterious Mutation, Boulder.
 1997, Genetics Society of Australia, Plenary Speaker, Perth.
 1997, University of Queensland, Australia.
 1997, LaTrobe University, Australia.
 1997, Florida State University.
 1998, Sloan Symposium on Limits to Knowledge in Evolution, University of California at Riverside.
 1998, Oregon State University.
 1998, University of Texas, Distinguished Evolutionary Biologist.
 1998, University of Madrid, El Escorial, Conservation of Genetic Resources.
 1998, University of Texas Health Science Center, Houston.
 1998, Symposium on Evolution of Asexual vs. Sexual Reproduction, La Sage, Switzerland.
 1998, Zoological Society of London, Origin and Nature of Biodiversity, Keynote Speaker.
 1998, University of Nevada at Reno.
 1998, University of California at Davis.
 1999, Indiana University.
 1999, Washington State University.
 1999, New Mexico State University.
 1999, North Carolina State University.
 1999, European Society of Evolutionary Biology, Barcelona.
 1999, University of Helsinki, Finland.
 1999, Uppsala University, Norway.
 1999, AIBS Presidents' Summit, Washington, D. C.
 1999, University of Oklahoma.
 1999, NSF/EC Workshop on the Use of Molecular Tools in the Study of Ecology.
 2000, Salmon Research in the Next Millennium, Santa Barbara, CA.
 2000, University of Florida.
 2000, State University of New York at Stony Brook.

2000, University of Missouri at Kansas City.
2000, Presidential Address, Society for the Study of Evolution, Bloomington, Indiana.
2000, Evolution: From Molecules to Ecosystems, University of Valencia, Spain.
2000, Sloan Symposium on Limits to Knowledge in Science, Columbia University.
2001, Distinguished Speaker Series, Beyond the Human Genome Project, Harvey Mudd College.
2001, Jacques Monod Symposium on Gene Duplication, Aussois, France.
2001, Fred Hutchinson Cancer Research Center, Seattle.
2001, University of Southern California.
2001, Whole Genome Workshop, DIMACS Conference, Rutgers University.
2001, Biophysics and Biochemistry, Oregon State University.
2001, Ecological and Evolutionary Genomics Symposium, University of Lausanne.
2001, Wright State University.
2001, Hatchery Symposium, National Marine Fisheries Service, Seattle.
2001, University of Utah.
2001, Linking Molecular Insights and Ecological Research, Stanford University.
2001, University of Kentucky.
2002, Workshop on the Development of an Evolutionary Synthesis Center, NSF.
2002, University of Illinois.
2002, Stanford University.
2002, Plenary Speaker, European Population Genetics Symposium, University of Leeds.
2002, Symposium on Ecological Genomics, Ecological Society of America.
2002, American Genetics Association, Symposium on Molecular Evolutionary Genetics.
2002, Bioinformatics 2002, Bergen, Norway.
2002, Symposium on Long-term Selection, University of Illinois.
2002, Michigan State University.
2002, Plenary Speaker, Beckman Symposium on Sequenced Genomes, City of Hope Hospital.
2002, Duke University.
2003, Yale University.
2003, University of Wisconsin, Madison.
2003, Plenary Speaker, Stat Day Meeting of Indiana Biostatisticians.
2003, Plenary Speaker, International Congress of Genetics, Melbourne.
2003, Bioinformatics in the Post-genomic Era, Stockholm.
2003, Symposium on Ecological Genetics, Leuven, Belgium.
2003, Symposium Celebrating William Hill's Honorary Doctorate, North Carolina State University.
2003, Mol. Biol. Evol. Symposium, Functional Evolutionary Genomics of Gene Duplication.
2003, Symposium on the Developmental Basis of Evolutionary Change, University of Chicago.
2003, Mathematical and Statistical Problems in Genome Science, University of Minnesota.
2003, University of Wisconsin, Milwaukee.
2004, Committee on Genetics, University of Chicago.
2004, Center for Gene Research and Biotechnology, Oregon State University.
2004, Gordon Conference on Molecular Evolution.
2004, Evolutionary Genomics Symposium, University of Arizona.
2004, Comparative Genomics of Vertebrates, La Londe Les Maures, France.
2004, Department of Biology, Notre Dame University.
2004, Ecological Genomics Symposium, Kansas State University, Kansas City.
2004, Brown University.
2004, University of Michigan.
2004, Harvard University.
2004, University of Valencia.
2005, Department of Genome Sciences, University of Washington.
2005, Department of Biology, McMaster University.
2005, University of New Mexico.
2005, Lead Speaker, Darwin's Birthday Celebration, University College, London.
2005, University of Buffalo.
2005, Princeton University.

2005, Department of Biology, University of Pennsylvania.
2005, Plenary Speaker, European Society for Evolutionary Biology, Krakow, Poland.
2005, Max Planck Institute for Developmental Biology, Tübingen.
2005, Symposium on Phenotypic Diversity and Evolution, Wenner-Gren Foundation, Sweden.
2005, NESCent Viral Tree of Life Working Group, Durham, NC.
2005, Symposium on Computational Genomics and Evolutionary Biology, Georgia Tech.
2006, University of Maryland.
2006, University of Massachusetts.
2006, University of Idaho.
2006, University of Iowa.
2006, NAS Sackler Colloquium on Adaptation and Complex Design, Irvine.
2006, Keynote Speaker, Bioinformatics 2006, Aarhus, Denmark.
2006, University of Lausanne.
2006, Pennsylvania State University.
2006, Autonomous University of Barcelona.
2007, University of Rochester.
2007, Evolutionary Genomics Workshop, Instituto Gulbenkian de Ciencia, Lisbon, Portugal.
2007, Keynote Speaker, Symposium on Integration of Genotype and Phenotype, Florida State University.
2007, University of Michigan.
2007, University of Iceland.
2007, Plenary Speaker, Society for Molecular Biology and Evolution, Dalhousie University.
2007, FASEB Ciliate Molecular Genetics Meeting, Tucson.
2007, Keynote Speaker, Gordon Conference on Structural, Functional, and Evolutionary Genomics.
2008, Keynote Speaker, Keystone Symposium on Complex Traits: Biologic and Therapeutic Insights, Sante Fe.
2008, University of Lyon, France.
2008, Portugaliae Genetica Symposium, University of Porto, Portugal.
2008, Keynote Speaker, Cold Spring Harbor Biology of Genomes Symposium.
2008, Advance Talk, Kansas State University.
2008, Genetics Society Symposium on Evolution of Recombination, University of Bath.
2008, Public Lecture on the Genomic Revolution, Sao Paulo, Brazil.
2008, Evolution Symposium, University of Pennsylvania.
2008, Department of Biology, New York University.
2008, Memorial Symposium of the International Prize for Biology 2008, Sendai, Japan.
2008, Marine Biology Laboratory, Woods Hole.
2009, University of Calgary.
2009, University of Lyon.
2009, Dean's Darwin Symposium, University of California, San Diego.
2009, Conservation Genetics Symposium, University of Chicago.
2009, Evolution Symposium, Max Planck Society.
2009, Plenary Speaker, Evolution of Sex and Recombination Symposium, University of Iowa.
2009, National Academy of Sciences Sackler Colloquium on Evolution in Health and Medicine.
2009, Monterey Bay Aquarium.
2009, Plenary Speaker, European Cytogenetics Conference.
2009, FASEB Ciliate Molecular Biology Meetings.
2009, Nei Presidential Lecture, Society for Molecular Biology and Evolution.
2009, Evolution Symposium, State University of New York at Stony Brook.
2009, Conference on Next-Generation Sequencing, Barcelona.
2009, Jackson Lab, Bar Harbor, Maine.
2009, Mathematics Institute, University of Tennessee.
2009, Center for Genome Research and Biocomputing, Oregon State University.
2009, Center for Advanced Studies, Princeton University.
2009, University of Arizona.
2010, University of Missouri.
2010, Kavli Institute, Workshop on Cellular Evolution, Santa Barbara.
2010, University of California at Santa Barbara.

2010, Department of Biology, Georgia Tech.
2010, Mutagenesis: What it means and how it has changed, Banbury Center, Cold Spring Harbor.
2010, SMBE Symposium on Population-size and Genome Evolution, University of Lyon.
2010, Casanova Memorial Lecture, University of Valencia.
2010 Louis Thaler Lecture, University of Montpellier, France.
2010, Workshop on Ciliate Endosymbionts, Pisa, Italy.
2010, Center for Comparative and Population Genomics, Cornell University.
2010, Gulbenkian Institute, Lisbon, Portugal.
2010, Cockerham Lecture, North Carolina State University.
2010, Graduate-student Invited Speaker, North Carolina State University.
2010, Biodiversity Research Center, University of British Columbia.
2011, Plenary Speaker, International Plant and Animal Genome Conference, San Diego.
2011, Kavli Institute, Workshop on Origins of Complex Adaptations, Aspen.
2011, University of Massachusetts Medical School.
2011, Plenary Speaker, Penn State Plant Biology Symposium.
2011, Keynote Speaker, Program in Functional Genomics / Systems Biology, University of Zurich.
2011, Keynote Speaker, Symposium in Honor of Dr. Masatoshi Nei, Penn. State University.
2011, Trends and Controversies in Evolutionary Developmental Biology, Ringberg, Germany.
2011, Summer School on Quantitative Evolutionary and Comparative Genomics, Okinawa, Japan.
2012, Keynote Speaker, Great Lakes Bioinformatics Conference, University of Cincinnati.