



Faculty

Richard T. T. Forman
 Professor
 Department of Landscape Architecture

Profile

Biographical Sketch

Richard T. T. Forman is the PAES Professor of Landscape Ecology at Harvard University, where he teaches ecological courses in the Graduate School of Design and in Harvard College. His primary scholarly interest is linking science with spatial pattern to interweave nature and people on the land. Often considered to be a “father” of landscape ecology and also of road ecology, he helps catalyze the emergence of urban-region ecology and planning. Other research interests include changing land mosaics, conservation and land use planning, built-and-greenspace urban forms, and the patch-corridor-matrix model. He received a Haverford College B.S., University of Pennsylvania Ph.D., honorary Doctor of Humane Letters from Miami University, and honorary Doctor of Science from Florida International University. He formerly taught at Rutgers University and the University of Wisconsin, and received the Lindback Foundation Award for Excellence in Teaching. He served as president or vice-president of three professional societies, and has received awards and honors in France, Colombia, England, Italy, China, Czech Republic, Australia, and the USA. Professor Forman has authored numerous articles, and his books include *Landscape Ecology* (1986), the award-winning *Land Mosaics* (1995), *Landscape Ecology Principles in Landscape Architecture and Land-use Planning* (1996), *Road Ecology* (2003), *Mosaico territorial para la region metropolitana de Barcelona* (2004), and *Urban Regions: Ecology and Planning Beyond the City* (2008).

Education and Scholarly Evolution

Professor Forman received his bachelor degree in biology at Haverford College and Ph.D. in botany at the University of Pennsylvania, after which he served two years as an American Friends Service Committee volunteer in Guatemala and Honduras. His early scholarly career focused on plant, moss, avian and forest ecology, which led in overlapping sequence to research in landscape ecology, road ecology, and urban region ecology and planning. Today his research and writing include these fields, plus changing land mosaics, conservation and land use planning, built-and-greenspace urban forms, the patch-corridor-matrix model, and more broadly, linking science with spatial pattern to interweave nature and people on the land. In addition to being a faculty member in the Graduate School of Design and Harvard College, he is an Associate of The Harvard Forest and Associate of the Harvard University Center for the Environment.

Teaching

Forman taught at the Escuela Agricola Panamericana (Honduras), University of Wisconsin, Rutgers University, and several field stations. At Harvard, he teaches graduate courses (landscape ecology, urban and suburban ecology, advanced topics in landscape ecology) at the Graduate School of Design, and a junior-senior course (ecology and land-use planning) in the Environmental Science and Public Policy program of the Faculty of Arts and Sciences. These courses explore ecological principles and applications for understanding, conservation, design, policy, management and planning of land, and often include 3-to-7-day intensive field-study trips. He served as Advisor for 25 doctoral and masters students. He was a finalist for the Levenson Outstanding Teacher Award in Harvard College three times, and has received the Lindback Foundation Award for Excellence in Teaching.

Honors Internationally

Professor Forman has served as a Fulbright Scholar in Colombia, CNRS Chercheur in France, Miegunyah Fellow at the University of Melbourne (Australia), CRES Fellow at Australian National University, and Founding Vice President of the International Association for Landscape Ecology. He received medals from the Faculty of Science of Charles University (Prague) and the Faculty of Architecture of the University of Florence (Italy). He served as Consultant to the President of Costa Rica and Minister of Natural Resources and Energy, and to the Mayor and Chief Architect/Planner of Barcelona. He is a Member of Clare Hall (University of Cambridge), an Honorary Member of the Italian Society of Landscape Ecology, and an Honorary Professor in the Academia Sinica in China.

Honors in the USA

Dr. Forman has received honorary degrees from Miami University (Doctor of Humane Letters), Harvard University (Master of Arts), Conway School of Design, and Florida International University (Doctor of Science). He served as Vice President of the Ecological Society of America and President of the Torrey Botanical Society. He established the Ecological Society of America's Washington Office, overseeing its initial practices and policy. In addition to directing university graduate programs, for twelve years he directed a small ecological research center at Rutgers, the Hutcheson Memorial Forest Center. Forman has been a Member of the Editorial Board of six scientific journals, has served on three National Research Council/TRB committees, and has written the Foreword for twelve published books. His board membership includes The Trustees of Reservations and The Nature Conservancy-Massachusetts Chapter. He was named Distinguished Landscape Ecologist in 1992 and was elected Fellow of the American Association for the Advancement of Science.

Early Career

Professor Forman's scholarly roots are in ecology, especially of forests, plants, mosses and birds. Early research included experimentally explaining a hierarchical species distribution (pre-phyto/biotron era) (Forman 1964), moss ecology (Forman 1969), tropical rainforest (Forman 1975), and community structure (Allen and Forman 1976). In an era before ecologists focused on spatial pattern and landscapes with a heavy human imprint, he launched into the first rigorously designed test of the effect of patch size on species diversity or richness, using old-growth woods in an agricultural landscape (Forman et al. 1976, Forman and Elfstrom 1975, Galli et al. 1976). Immediately thereafter he spearheaded a then-rare multidimensional analysis and book for an entire landscape (*Pine Barrens: Ecosystem and Landscape*) (Forman 1979).

Landscape Ecology

These two steps galvanized the idea of "landscape ecology" (the ecology of large areas, such as seen from an airplane window), and with colleagues from several fields Forman began to build the groundwork for a field of study, including some foundation publications (Forman 1979, Forman and Godron 1981, Forman 1981, Forman 1983, Risser et al. 1983). A pioneering landscape-wide modeling study emerged as a key for the subsequent logging-and-owls controversy in the U.S. Pacific Northwest (Franklin and Forman 1987). Forman's 1986 book (*Landscape Ecology*) with M. Godron was the first synthesis of modern landscape ecology, and elaborated the patch-corridor-matrix model for understanding and improving land-use pattern. In 1995 he published the more definitive book on the subject, and extended the vision to include regions (*Land Mosaics: The Ecology of Landscapes and Regions*). Research in landscape ecology continues (Cantwell and Forman 1994, Forman and Collinge 1995, Collinge and Forman 1998, Hersperger and Forman 2003, Forman 2009a, 2009b).

Road Ecology

Again in 1995, challenged by the paradox of conspicuous road systems in the landscape and the scarcity of ecological understanding of them, Dr. Forman began collaborating with the transportation community and wildlife biologists to build foundations for a field of "road ecology". His early articles provided syntheses and ideas (Forman and Hersperger 1996, Forman and Alexander 1998, Forman and Deblinger 2000, Forman 2000, Forman et al. 2002). The effort culminated in the spearheading of a multi-author volume co-written by 14 ecologists, hydrologist, and transportation experts (*Road Ecology: Science and Solutions*) (Forman et al. 2003). This was the first comprehensive book on the ecology of roads and vehicles, and has effectively jump-started the field into rapid coalescence. Ongoing research on road ecology includes both its intellectual development and its solutions for transportation and the land (Forman 2004, 2006, Forman and McDonald 2007).

Urban Region Ecology and Planning

Professor Forman's interest in "urban region ecology and planning" appears in an early small co-authored book (*Landscape Ecology Principles for Landscape Architecture and Land-Use Planning*) (Dramstad et al. 1996). The concepts then began to gel in an ambitious planning project and book for Barcelona, Spain, that highlighted the importance of natural systems and their uses in an urban region (*Mosaico territorial para la region metropolitana de Barcelona*) (Forman 2004). Further dimensions evolved in a local ecological and planning analysis for a suburban town (Forman et al. 2004) and in global-scale studies (McDonald et al. 2008, Forman 2008). These foundations, along with a spatial environmental analysis of 38 urban regions, large to small, worldwide, coalesced into a first-synthesis book for this challenging frontier of science, planning and society (*Urban Regions: Ecology and Planning Beyond the City*). Research includes the ecology of diverse urban forms (Forman 2008, 2009c, Forman et al. 2009).

Other Experience

Biological Aide, U. S. Fish and Wildlife Service, Patuxent Research Refuge, Maryland. Member, Committee of Examiners for GRE Advanced Test in Biology, Educational Testing Service. Consultant and collaborator with The Nature Conservancy in protection of natural areas. Presenter of four workshops/sessions on landscape ecology and applications in Florence, Italy. Invited presentations (>240) at institutions in 23 nations, plus invited talks at Forman's home university, and contributed papers (ca. 60) presented at professional meetings. Commencement address, "Choose a place, at any scale; make it better, for nature and us," Florida International University. Served on diverse task forces, committees, and boards for local and state agencies and statewide non-profit organizations, focusing on open space protection, conservation, recreation, and historic preservation.

Primary Books

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