

Preface

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We are ecologists who met in 1988 during the process of writing a proposal to fund a site in the Luquillo Mountains of Puerto Rico as part of the Long-Term Ecological Research (LTER) network, a National Science Foundation (NSF) program designed to support long-term, collaborative research that is integrated with education and outreach at 26 sites throughout the United States. Despite our different research interests at the time (Willig, community ecology of vertebrates; Walker, plant succession), we have collaborated with each other on various syntheses regarding disturbance ecology (e.g., Walker et al. 1996; Walker and Willig 1999; Willig and Walker 1999; Willig et al. 2012) and have shared many frustrating and rewarding moments in our more than 25-year history of interactions as part of the LTER program. In the process, we have become better colleagues and good friends, frequently searching for promising scientific reasons to continue productive collaborations. This book represents one such opportunity.

CONCEPTION, GESTATION, AND PARTURITION OF THE BOOK

We informally chatted with each other and our colleagues in the Luquillo LTER program about the ways in which we think that involvement in long-term ecological research changed us as scientists. We initially had contemplated editing a volume such as this one, but with a focus on scholars working in the Luquillo Mountains rather than those working throughout the entire LTER network of 26 sites. We decided that although the latter task was more challenging, the final product would have enhanced generality and broader appeal because it reached out to those involved in the LTER program at a cross-section of sites that represented different histories and management models.

Scientists are trained to write dry, didactic prose, but here we offered them the challenge of writing more personal and clearly retrospective essays, sometimes covering three or more decades of their lives. We recognized that there is a natural tendency to emphasize positive experiences and that an anonymous approach might have resulted in a more accurate balance of positive and negative responses. We also noted the difficulty that those with little or no research experience outside the LTER program had in evaluating its effect on their personal growth as scientists. Furthermore, we limited our participants to scientists

and information managers who have been with the LTER program for at least one and a half funding cycles (9 years), leaving out relative newcomers and students. Despite these caveats, we believe that this collection of essays provides a fascinating glimpse into how the collaborative, long-term research conducted within the LTER program has affected participating scientists and altered their perspectives, attitudes, and practices. We believe that this collection of essays and the analyses based on them by scholars outside of the biophysical sciences will be of broad interest, not only to ecologists and environmental biologists, but also to other biologists, science administrators, educators, historians, social scientists, information managers, and network designers. In short, this book explores ways in which a pioneering experiment, the LTER program, has affected the nature of scientists who have been funded by it.

PERSONAL REFLECTIONS OF M. R. WILLIG

My experiences in the Luquillo Mountains began early in my career (summer of 1982) with support from a sequence of three research fellowships from the Department of Energy's Science Programs administered by Oak Ridge Associated Universities. At that time, my interests were rather narrowly focused on evolutionary ecology of vertebrates, but I had strong quantitative expertise and considerable tropical experience. The need or desire to collaborate with those working on taxa other than animals was not apparent to me at that time, and working with ecosystem scientists, geoscientists, atmospheric scientists, or social scientists was not a direction that I would have remotely considered to be a part of my future. Long-term research meant a 2- or 3-year project, and collaboration mostly involved those with similar interests. Participating in the working group that crafted our first and declined LTER proposal would change all of that. I found myself surrounded by those who I knew very poorly and with whom I did not share a vocabulary, much less a common view of the important ecological questions. In retrospect, I was rather myopic and certainly poorly prepared to engage in a career that would ultimately involve suites of multidisciplinary collaborators dedicated to exploring long-term ecological interactions. The LTER program allowed me to appreciate the diversity of interactions (abiotic and biotic) that play out over the long term to determine the structure and functionality of complex ecological systems. By analogy, I was finally watching long segments of a film to understand the plot and its dénouement—rather than focusing on one or a few actors during a few frames of the movie! This led to excitement as well as considerable challenges, both personal and scientific. My hope is that this book captures the excitement and challenges faced by others who may have encountered this same phenomenon from a variety of perspectives and experiences.

PERSONAL REFLECTIONS OF L. R. WALKER

I am enriched by the numerous collegial experiences with fellow ecologists at the LTER site in Puerto Rico (most notably as a member of a “disturbed plant group”), but I am also frustrated by the pace and pitfalls of collaborative research. Working on primary succession on landslides in Puerto Rico has left me somewhat out of the mainstream research focus of the site (secondary succession in disturbed tropical forests). I never did convince the active stream ecologists in the group that landslides were just downhill flows of carbon and nutrients, although I certainly had fun trying! Nevertheless, there have been plenty of opportunities for me to collaborate with other researchers studying the same site, particularly in areas of synthesis (e.g., of hurricane effects on the Luquillo Mountains), with wonderfully dedicated technicians and students who collected much of the long-term data on

landslides, and with colleagues from Puerto Rico and elsewhere who were interested in placing Puerto Rican ecology in a global context.

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