

making the hypotheses about causes of changes in species abundances and compositions much more interesting and credible. It also makes the ultimate moral much messier: Differing riparian areas have changed in different ways due to anthropogenic influences. Rivers and even their reaches are more idiosyncratic than many of us currently suspect. In retrospect, though, maybe this is what we should have expected because of the diversity of damage that people have inflicted on rivers in the past century – from small to gargantuan dams, from small to large diversions of both surface and ground water, to introduction of both innocuous and highly invasive plants. Humans have certainly changed the ecology and hydrology of desert riparian areas, but this book shows us that the exact nature of those changes is often multi-dimensional and not so predictable. Sometimes the actions we have taken seem to facilitate greater biological diversity, at least of large woody plants.

Not only is desert riparian biology idiosyncratic, but so is the style of this volume. Common names of plants are used throughout, with no attempt to provide a list of binomials. Imperial (English) units are used instead of metric units. The maps on individual rivers were each apparently constructed *de novo*, resulting in some mislabeling, such as Lake Powell being labeled as Lake Mead at the downstream end of the Upper Colorado River. The all important maps in the synthesis section show each important woody tree or shrub species and whether they have increased or decreased in abundance at each place where repeat photographs have been taken. This forms a phenomenal dataset, except that the authors have so much data that map symbols overwrite one another, to the point where one cannot discern the data. Colour map symbols were not used in their synthesis, but would have gone a long way to making these maps more readable and useable.

*The Ribbon of Green* demonstrates how rich the comparative method can be. Comparing vegetation and hydrology across both space and time gives a gorgeous picture of human-induced impacts. Although the hydrologic data is quantitative, the vegetation data from these repeated photographs can only be qualitative. But this is partly compensated for by the fascinating sample of repeat photographs reproduced. The large format of this volume, 31 x 23 cm, truly helps bring out this richness of detail. This is a book that any botanist, ecologist, geographer, or natural historian who works in or even just occasionally travels through Arizona or Utah should have on their shelf.

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**The Ribbon of Green: Change in Riparian Vegetation in the Southwestern United States** by Robert H. Webb, Stanley A. Leake, and Raymond M. Turner (2007) University of Arizona Press: Tucson, 480 pages, ISBN 0-8165-2588-9, US\$75.

*The Ribbon of Green* is an extraordinary and most unusual book, very much in the tradition of Bob Humphrey's 1987 classic *90 years and 535 miles: Vegetation changes along the Mexican border*. Forty-three years ago, one of the authors, Ray Turner, along with Rod Hastings, published a similar book titled *The Changing Mile*. All three books attempt to infer vegetation and ecological changes during an intervening century by comparing repeat photographs. Repeat photography is the art of trying to exactly as possible duplicate an earlier photograph. Because of the panoramic nature of these photos, usually taken for the purpose of surveys, one can usually only discern the identities of woody trees and large shrubs. *The Ribbon of Green* covers rivers in Arizona and Utah, with some limited coverage of neighboring states. Most of the book is comprised of 23 chapters covering 21 rivers (the Colorado River justifiably gets three chapters), using elegant parallel structure between chapters. For each chapter, the authors provide a subset of their enormous collection of repeat photographs and their interpretations of vegetational and hydrological changes. This is a data intensive volume. The final pair of chapters provides a superb synthesis.

What makes this an especially interesting volume is that it is written by two hydrologists and a botanist,