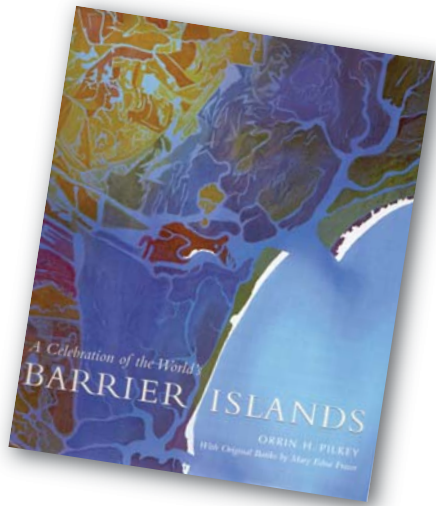


A Celebration of the World's Barrier Islands



A BOOK BY ORRIN H. PILKEY

WITH ORIGINAL BATIKS BY MARY EDNA FRASER

REVIEWED BY HAROLD D. PALMER

309 pages, Columbia University Press, ISBN 0-231-11970, hardback, \$44.95

The publisher's press release states that *A Celebration of the World's Barrier Islands* is "one part stunning coffee-table book and one part state-of-the-art popular science." It is certainly both, but that's just the surface. This is an attractive and thoughtful book, carefully prepared for the curious layman as well as the serious professional coastal scientist. The Prologue sets the book's tone through Pilkey's observations of barrier island genesis and development; an explicit statement which reveals his passion for these features and their phenomenal variety.

Fraser's stunning batiks complement the text through 46 masterful creations derived from her aerial photos of the various subjects under discussion. This labor-intensive art form, created on fabric through repeated applications of wax

and dye, result in colorful and faithful pictures of barrier islands, deltas and other coastal features. They are interspersed in a text containing 182 photographs, maps and diagrams selected by Pilkey to illustrate the 12 chapters, which span the world of barrier islands from the tropics to the Arctic.

Pilkey identifies five critical elements required for barrier island formation:

- a rising sea level
- a gently sloping mainland surface
- a ready supply of sand
- energetic waves
- a low to intermediate tide range

Lacking any of these elements, no barrier islands will occur.

Throughout the book, Pilkey and Fraser emphasize the delicate equilibrium among sea level, sand supply, waves, and currents in the genesis of barrier islands. Man's interdiction usually upsets this balance when he attempts to frustrate and control these processes. Attempts to modify these interactions "... almost without exception [initiate] changes for the worse and the delicate equilibrium goes awry." For these "restless ribbons of sand," Pilkey has stated publicly that, "hurricanes are godsend for barrier islands...because they don't change barrier islands but are a criti-

cal part of their evolution." In his view, "[barrier islands] require natural catastrophes for their very survival."

Of course such a view is to some heretical since the loss of life, destruction of structures, and temporary erosion and retreat of the shoreline all inflict social, economic, and usually political consequences, highlighting the negative aspects of hurricane (or storm) impacts on the islands.

Throughout the book the theme of natural processes is contrasted with human "colonization and modification" of barrier islands to suit the immediate desires of coastal developers. Examples of the precarious interplay between man and nature abound in the various chapters, describing not only our familiar North American barrier islands, but also examining such features in Portugal, the Netherlands, Iceland, Columbia, Taiwan, Nigeria, and many other nations who cope, in one way or another, with "nature's most flexible and dynamic environment." In places, Pilkey intertwines these descriptions with personal vignettes, resulting from first-hand experiences and decades of island study. These vignettes

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add flavor to the book and enhance to the reader's understanding of barrier island environments. Perhaps Pilkey's philosophy of barrier island dynamics is best summed up in Chapter 12, "Requirements for Some Friends." There he provides a succinct and plain-spoken summary of the natural and anthropogenic changes in barrier islands, cause and effect scenarios, and thoughtful insights on the future of these features.

Pilkey notes that the islands are analogous to life itself; they use energy, grow fat or thin, protect themselves, recover, have enemies and friends, have different personalities, and finally die. In *How to Read a North Carolina Beach*, Pilkey and his colleagues say, "what other features on the surface of the earth possess the ability and even the intelligence to escape from processes that would destroy them?" After citing numerous examples of encroachment by accelerating coastal development, Pilkey concludes in *A Celebration of the World's Barrier Islands* that "...whether we assume barrier islands are similar to living things or just dynamic sandbars, we must exist with them, not on them."

This volume contains a glossary, four tables, and an index. References from both technical and non-technical sources (and which complement material mentioned in or relevant to this book) are grouped in eight pages as end material. Many references are contemporary; however, Pilkey also augments the book with older citations providing historical perspective. At the price, this book is a bargain for all—students, laymen, and marine and coastal geologists and naturalists. The colors used in the artwork are superb. The drawings and maps (each complete with scales!) are clearly labeled and finely drawn. This book is highly recommended to all whose interests include coastal environments. ☐