

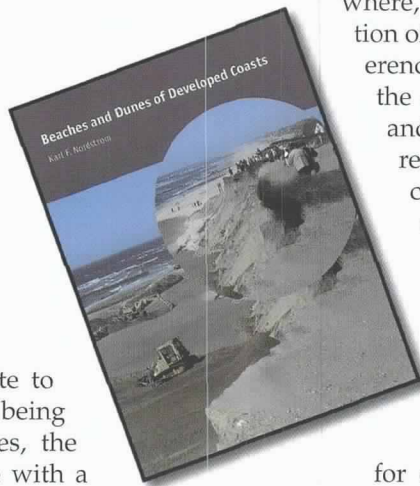
Beaches and Dunes of Developed Coasts

Karl F. Nordstrom
338 pages.
Cambridge University Press
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As more and more people migrate to the world's coasts, their impacts are being increasingly felt. In many countries, the majority of the population now live within a few tens of kilometers of the coastline and as a result, the pressure on the coasts are being intensified. This book is a very clearly written and descriptive treatment of how and to what extent human activities have altered coastal landforms and processes. It details the many ways beaches and dunes are eliminated, altered, and replaced and the differences between natural landforms and the human artifacts that replace them. While there are many examples of human impacts that are easily recognizable to us all, Karl Nordstrom's treatment of these varying impacts is very thorough and systematic and also includes a myriad of activities that are not commonly appreciated or recognized. Activities treated include elimination of landforms, stabilization and destabilization, sand mining and nourishment, construction of every type imaginable (from boardwalks to breakwaters), waste disposal, military activities, channel alterations, sand supply reduction and disruption.

Although many individual examples given are from the sandy barrier island Atlantic coast environment, there are a wide variety of geographic examples used from Europe, Japan, Australia, New Zealand and else-



where, which provides for broad use and application of the book. This is also a good historical reference in that it includes discussion of some of the oldest recorded coastline alteration efforts and also a number of very recent reports and references and is thus very up to date and comprehensive. The author has done an exceptional job of researching and referencing the book with over 700 references cited.

Although modification of the coastal environment and human impacts on the shoreline is a topic today of considerable attention and difference of opinion (retreat, nourishment or armor, for example) the author focuses primarily on coastal landforms, how they have been modified and the temporal and spatial scale of those modifications, rather than making a personal or value judgment on whether these are good or bad. This is a very objective treatment of the variety of ways in which humans have altered the coastline with an emphasis on the importance of retaining naturally functioning beaches and dunes in ways that achieve natural values while accommodating development and use. The book is written from the viewpoint of a coastal geomorphologist and as such is very descriptive rather than quantitative. It can easily be understood by a wide variety of readers, whether scientists or coastal planners. I think the most significant limitation of the book is its general lack of photographic examples of the many coastal landform modifications that are so completely discussed in the text. There are only 34 photographs in a book of 286 pages and several chapters have no photographs at all. Perhaps the book's greatest value is stimulating the reader to think carefully about the vast and somewhat unrealized scope of human activities, both along the shore as well as onshore and offshore that have altered coastal landforms and processes globally.

Books Received for Review:

* Biotic Response to Global Change: The Last 145 Million Years,
Edited by Stephen J. Culver and Peter F. Lawson,
Cambridge University Press

* Charles Darwin's Zoology Notes and Specimen Lists from H.M.S. Beagle,
Edited by Richard Keynes,
Cambridge University Press