and encompass human impacts. Some may find this an almost humorous statement given the fact that problems with the disposal of lethal chemical and radioactive wastes in the marine environment have plagued us for decades.

In general, the content of this text is what one might expect from any introductory book on marine geology. However, a chronic problem is the oversimplification and qualitative approach used when explaining many concepts, a problem particularly apparent in discussions of wave and current hydrodynamics. Use of archaic terminology, such as *winter and summer beach profiles,* is evident throughout the entire text. In several instances discussion leads to confusion rather than enlightenment, a case in point being reference to the *Dupal Anomaly in the Indian Ocean.* Previously-published data used to develop arguments and explain phenomena often undergo partial discussion. One such example is the provocative sea-level curve of Fairbridge (1961), in which oscillations in sea-level relative to present are noted during the late Holocene. Subsequently, the reader is denied the often exhilarating intellectual debate common in science.

Some may find the writing style objectionable with gratuitous statements such as *Sooner or later, every marine geologist becomes familiar with the less pleasant effects of waves when at sea,* having a tendency to enervate from the seriousness of the book. Unfortunately, the text is marred by a multitude of typographical errors throughout. In addition, while 209 figures are used, the cartographic quality is often poor and few new figures were drafted solely for the text. One might ask how such poor quality escaped the authors' attention on reviewing the galleys, or indeed the publishing giant, Springer Verlag. Certainly, as a revised edition, such shortcomings are unacceptable, not to mention extremely annoying to the reader.

Although there is a need for a text of this nature in the earth science curriculum, there may be some hesitation in its acceptance as a required class text, primarily because of its qualitative approach and generally sloppy presentation. The book's introductory flavor implies that it will not meet the needs of the marine geology practitioner. It is clearly evident that this is not the *magnum opus* of two internationally acclaimed geologists, nor is it an advertisement in quality control from a reputable publisher.

Gregory W. Stone
Louisiana State University
Baton Rouge, Louisiana

Florida Hurricanes and Tropical Storms, 1871–1993: An Historical Survey, Fred Doehring, Iver W. Duedall and John M. Williams, 1994. Technical Paper 71. Division of Marine and Environmental Systems, Florida Institute of Technology. Gainesville, Florida: Florida Sea Grant College Program, University of Florida.

Along the Gulf of Mexico and south Atlantic coasts, few if any natural phenomena have earned the fear, respect and wonder of a hurricane. This may be true now more than ever, in light of the strength and ferocity of recent tropical cyclones like Gilbert (1988), Hugo (1989) and Andrew (1992). In addition, several experts are proposing that warming in the ocean basins as a result of climatic-change could result in an increase in the overall number of hurricanes developing within the Atlantic and Caribbean basins. To put current and future trends into perspective, an historical examination of these systems is needed—*Florida Hurricanes and Tropical Storms* fills the void as a solid historical reference book for tropical storms impacting the Sunshine State and a much-needed update for the National Hurricane Center's report entitled "Florida Hurricanes" (Dunn, 1967).

While published as a technical paper, the work is hardly technical at all. Rather, the authors purposely developed a text that is written for the non-technical reader interested in an historical assessment of Florida's tropical storms. Yet the storm summary table and decadal illustrations of storm tracks should be of great benefit to professional meteorologists, climatologists and any regional resource managers interested in the spatial and temporal distribution of hurricane landfalls in the state of Florida over the last century.

The text is a bit thin in terms of content and is somewhat disappointing. It seems as though the authors may have been caught in a quandary between the need for brevity (for publication purposes?) versus an effort to establish a better baseline understanding of the hurricane for the young and/or non-scientific reader. One or two simple illustrations in Chapter 1 (Introduction) would have gone far to supplement the text discussion. Chapter 2 is devoted to an historical overview of

storm occurrences and includes a number of personal anecdotes from individuals who suffered through various storms over the years. While these accounts may have little or no "value" for the technical user, they do provide an entertaining insight into the hurricane experience from the viewpoint of eye-witnesses. Chapters 3 and 4, which appear almost as after-thoughts, are brief sections devoted to Hurricane Andrew, the costliest natural disaster in United States history.

The Reference section from *Florida Hurricanes* ... provides a practical listing of relevant publications and textbooks on the subject and serves as a useful summary of important works describing these tropical storms. A glossary of selected terms and a section on "hurricane preparedness" close out the book. The glossary is far too brief even for the purposes of this text; more could have been added to improve the value and readability of the text. As an example, twice the authors refer to "Cape Verde type" storms, yet they fail to explain the meaning or importance of this descriptive phrase to the uninitiated reader.

Unquestionably, the greatest value of *Florida Hurricanes* ... is its collection of Tables 1 through 4, which include storm-impact information for each event and Track Plates 1 through 13, which illustrate the storm tracks on a decadal basis. Indeed, *Florida Hurricanes* ... would likely be just as valuable if only composed of this information. Of course, no book is free from error, but Table 1 does include a typographical error that requires correction: Category 3 storms are classified as having an upper pressure of 28.47 inches rather than the 29.47 inches indicated.

The publisher lists *Florida Hurricanes* ... for a very modest and affordable $5.00. Regardless of the few very minor problems, *Florida Hurricanes and Tropical Storms* would not only prove to be a valuable resource to any weather-and-climate collection, but also should be considered a required addition to every public and school library within the state of Florida.

John M. Grymes III
Southern Regional Climate Center,
Louisiana State University
Baton Rouge, Louisiana

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DUNN, G.E. 1967. *Florida Hurricanes.* Coral Gables, Florida: Technical Memorandum WBTM SR-38. Environmental Sciences Services Administration/National Hurricane Center.

Seasonal and Interannual Variability of the Western Mediterranean Sea, edited by P.E. La Violette, 1994. Washington, D.C.: American Geographical Union, 373p. ISBN 0-87590-260-X, $57.00.

This book is published by the American Geophysical Union as part of the Coastal and Estuarine Studies Series. It provides a comprehensive synthesis of current knowledge on circulation within the Western Mediterranean Sea. Much of this volume synthesizes the wealth of oceanographic information collected during the 1980's by several large-scale, long-term international experiments such as Donde Va?, the Western Mediterranean Circulation Experiment (WMCE), Physical Oceanography of the Eastern Mediterranean (POEM), and the Gibraltar Experiment. It is an invaluable reference for researchers and teachers concerned with physical oceanographic processes and ocean–atmosphere interactions in this semi-enclosed sea. Although the main focus is on physical oceanography, it provides important background information for oceanographers and coastal scientists in a broad range of sister disciplines. It will also be of interest to oceanographers concerned with circulation of semi-enclosed seas in other parts of the world.

The book unfolds with an "Introduction" by the Editor which gives a succinct overview of the major water masses and forcings for circulation in the Western Mediterranean Sea. He summarizes the dominant forcing mechanisms for circulation as thermohaline, atmospheric pressure, wind stress, and hydraulic changes. These forcings exhibit strong seasonal variability which result primarily from seasonal variability in local continental climates. The Introduction is followed by fifteen chapters, separated into four main parts.

Part A, entitled, "Seasonal and Interannual Variability in the Straits," contains two chapters. The first chapter describes heat transport estimates through the Strait of Gibraltar and the second presents what is known of the seasonal variability of the water masses and transport through the Strait of Sicily. In Part B, "Seasonal and Interannual Variability in the Regional Basins," each chapter describes aspects of circulation in a different region of the Western Medi-