

HURRICANES: A REFERENCE HANDBOOK (SECOND EDITION)

Patrick J. Fitzpatrick, 2005, 412 pp., \$55.00, hardbound, ABC-CLIO, ISBN 1-85109-647-7

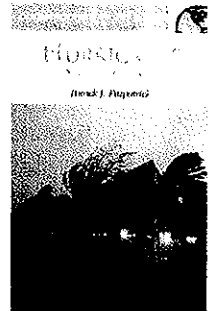
This book is billed as a "reference handbook" and presents itself as "a good starting point for research by high school and college students, scholars, and general readers as well as by legislators, business people, activists, and others." I thought the language might be somewhat technical for those at the lower educational rung of that group. However, that aside, I liked the book, and believe there is information therein for everyone.

I particularly liked the section on the "Chronology of Weather Advances Related to the Study and Forecasting of Hurricanes" (beginning on page 105). This section has something for everyone, and although it says it relates to hurricanes, virtually every advance in meteorology directly or indirectly relates to hurricanes.

I also liked the section on global warming, feeling that his treatment was unusually (by the standards of today's media) evenhanded. Fitzpatrick's statements on the relationship between changes in hurricane frequency and intensity predate the outrageous 2005 hurricane season, but appear to have considered most

of the controversial papers recently written on the subject. That his opinions still seem to make sense despite that spike in both frequency and intensity is a testament to their general soundness.

Fitzpatrick had a good discussion of the events leading up to and including Project Stormfury. I particularly enjoyed this section, having been a U.S. Navy participant. My role was so far down the totem pole that it was hard to see the big picture. Fitzpatrick gives us a nice view of the big picture and the evolving science that eventually killed the effort. One little side note that was missing was Imelda Marcos's attempt to control a typhoon by cloud seeding. I first heard this story from Charlie Holliday, then at the Air Force Global Weather Center in Nebraska, but have since heard roughly the same account from a friend in the Philippine Met service. A typhoon was threatening to disrupt the 1974 Miss Universe Pageant



INTRODUCTION TO COASTAL DYNAMICS AND SHORELINE PROTECTION

G. Benassai, 2006, 352 pp., \$195.00, hardbound, WIT Press, ISBN 1-84564-054-3

This book provides an integrated approach to coastal dynamics and shoreline protection, aided by the use of specific case studies. Using practical and theoretical application, this book explores factors such as winds, sea level variations, offshore waves (predicted and measured, regular and random), and wave transformation and breaking, as well as topics of sediment transport computation, beach profile and shoreline modeling, and coastal protection systems.

WEATHER: ESSENTIAL FACTS ABOUT THE EARTH'S WEATHER

Michael Bright, 2006, 144 pages, \$10.99, paperbound, Barron's Educational Series, ISBN 0-7641-3498-1

How do hurricanes form? Where is the world's hottest location? Which American city has the largest average snowfall? Part of the Barron's Pocket Factbook series, this title provides facts on major hurricanes and typhoons of recent decades and the tracks they have taken. It also contains information on reading and understanding weather maps, climate variations around the world, the global warming problem, and much more.

CLOUD OPTICS

A. A. Kokhanovsky, 2006, 276 pp., \$129.00, hardbound, Springer-Verlag, ISBN 1-4020-3955-7

This book summarizes current knowledge on cloud optical properties, including their ability to absorb, transmit, and reflect light, which depends on the clouds' geometrical and microphysical characteristics such as sizes, shapes, and structures of droplets and crystals. In addition, problems related to the image transfer through clouds and cloud remote sensing are addressed. All basic ideas of optics as related to scattering of light in clouds (e.g., the Mie theory and radiative transfer) are considered here in a self-consistent way.

in Manila, so the Philippine Air Force was ordered to seed the storm. It is unclear whether the pilots had any knowledge of what they were doing, but they flew out and did something. Anyway, the typhoon turned, so the mission was successfully accomplished. Maybe Fitzpatrick wasn't aware of it, or just couldn't bring himself to treat it seriously. In either case, it is a minor omission.

I was unable to reconcile the statement that "a mature system (presumably a hurricane) will weaken dramatically as it moves over water cooler than 80 degrees (F)" (p. 9) with a following assertion that the system still has an intensity potential of at least 101 miles per hour (p. 10).

I was confident that lightning is frequently present in the eyewall of hurricanes, which is contrary to Fitzpatrick's assertion on page 23. Some cursory review of the literature supports him, and some of the lightning in the strong hurricanes of 2005 (Emily, Katrina, and Rita) was unusual enough to cause me to rethink my position.

Fitzpatrick discusses the controversy of 1-minute wind averaging versus 10-minute averaging, and notes that other than the United States, the rest of the world uses 10-minute averaging (p. 95). This reminds me of a meeting I hosted between the heads of the International Regional Specialized Meteorological Centres for Tropical Cyclones (which are listed on p. 99 of the book) at the National Hurricane Center (NHC) in 1995. These are the centers, comparable to NHC, responsible under the World Meteorological Organization for

tropical cyclone forecasting all over the world. Represented were China, India, Japan, Fiji, Australia, La Reunion (for France), and the United States. The United Kingdom also had an observer present. When this topic came up, the U.K. observer chided the United States as being out of step with the rest of the world, but when everyone was heard from, there was no uniform preference for either averaging time. India and China both use averaging of less than 10 minutes. Since these two countries represent a large portion of the world's population, it is not fair to conclude the United States is out of step; perhaps we are all out of step with each other. One other thought: the current National Weather Service Automated Surface Observing System (ASOS) (nearly all observations are now automated) uses 2-minute wind averaging.

One other nitpick: Fitzpatrick states on page 126 that Gordon Dunn died of a stroke at home after a shift during Hurricane Hazel (1954). That was, of course, not Gordon Dunn, but Dunn's predecessor, Grady Norton. That was just a slip because Fitzpatrick later notes (p. 134) that Dunn retired in 1968 and was replaced by Bob Simpson.

I recommend this book for reference, just the way I intend to use it.

—JERRY JARRELL

Jerry Jarrell is a past director of the National Hurricane Center (1998–2000), and is now retired and living in Bend, Oregon, far from the threat of any hurricanes.

THE SCIENCE AND POLITICS OF GLOBAL CLIMATE CHANGE: A GUIDE TO THE DEBATE

Andrew E. Dessler and Edward A. Parson, 2006, 190 pp., \$34.99, paperback, Cambridge University Press, ISBN 0-521-53941-2

When the reference section of a book gives roughly equal space to venerated scientific assessments and contrarian canards, a disingenuous framing of climate science often lies within. But my fear for the state of science as described in *The Science and Politics of Global Climate Change: A Guide to the Debate*, was soon put to ease. Andrew Dessler and Edward Parson's book is both insightful and engaging.

They open with a powerful organizing principle for the climate debate and their book: to clearly distinguish between objective understanding (i.e., what we know) and subjective value judgment (i.e., what we believe should be). As a framework for thinking, this holds great promise: it curbs the potential to use

ignorance to manipulate the debate, but also acknowledges the limits of scientific understanding. Even when policy makers ground their decisions in the best available knowledge, they must still balance that knowledge with ethical considerations and the policy implications to a broad range of constituents.

This framework isn't new, but Dessler and Parson use it to present a compelling and accurate description of climate science, then they objectively assess the potential impacts of climate change and possible societal responses. Along the way, they take on



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