

might mislead young students. Freshwater elasmobranchs (p. 23) have, for a long time, attracted the comparative biochemists studying the evolution of enzyme systems. Tench (p. 13) is known also in the British Isles as not having a vegetable diet (KENNEDY and FITZMAURICE, 1970) and several speculative guesses on fish anatomy are misplaced.

Sometimes the authors are too didactic, missing the main point. They examine the question (p. 200) of the "point of no return" existence in the early life of fish, quoted some bibliographies in favour of this term and end by referring to the 1963 classic paper by Blaxter and Hempel, who actually introduced PNR. They again miss the point when stating that starved larvae all rely on protein metabolism because they have no lipid reserves. Earlier and more recent studies (ELDRIDGE, *et al.*, 1982) explicitly show that this is not the case in several fish species. Larvae often preserve oil globules after PNR.

The authors complain about lack of data on the predation of fish larvae (p. 203), but curiously they did not explore the English translation of the *Journal of Ichthyology* (since 1968) where this is a hot subject.

This book is a much-needed and important introduction to fishery management, but it could also serve as scientific background to those intending to work and giving advice in stock assessment.

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Coastal Sedimentation, edited by D.J.P. Swift and H.D. Palmer, 1978. Dowden, Hutchinson, and Ross, Stroudsburg, Pennsylvania, 339p. \$US 48.50, ISBN 0-87933-330-8.

This is the sixth volume in the 'Benchmark' series to cover aspects of coastal sedimentation. Others have included two volumes edited by M.L. Schwartz (*Spits and Bars*, 1972; and *Barrier Islands*, 1973)

and *Beach Processes and Coastal Hydrodynamics* (edited by J.S. Fisher and R. Dolan, 1977). The present book is a collection of twenty papers, representing some seventy-five years of publication (1902-1976), and organized into four thematic groups: seven papers on "the coastal deposits," four on "studies of fluid motion," and four on "studies of substrate response" [to fluid motion]. Each group is preceded by a short justification, history, and critique. The comments preceding the first two sections are particularly useful and provide references to other important contributions.

The first group of papers begins with excerpts from Fenneman's discussion of the coastal "profile of equilibrium" (1902). This is followed by two contrasting approaches to the problem of profile adjustment under rising sea level: the first, and early stratigraphic study (Fischer, 1961); the second, a now-famous coastal engineering model (Bruun, 1962). The next three contributions examine the validity of the equilibrium profile concept: Dietz (1963, "Wave-base, marine profile of equilibrium . . .: a critical appraisal"); discussion with defence of the concept (Moore and Curray, 1964); and reply (Dietz, 1964). The final paper is by Wright and Coleman (1972) on the role of wave climate in the development of subaqueous delta profiles.

The second section, on coastal deposits, falls into two parts. The first comprises three classic papers on coastal lithofacies geometry as it evolves in response to changing sea-level and sediment supply (Curray, 1964; Curray, Emmel, and Crampton, 1967; Sheridan, Dill, and Kraft, 1974). The second consists of two papers examining the development of grain size patterns on the shoreface and inner shelf (Pilkey and Frankenberg, 1964; and Swift, Sanford, Dill, and Avignone, 1971).

The third section includes papers, by Murray (1970), Palmer and Wilson (1975), and Caston (1976), on wind-driven currents in the coastal zone; and a review paper by Csanady (1976) on "Wind-driven and thermohaline circulation over the continental shelves." The final section (emphasizing sediment transport) includes a mixed set of contributions by Inman and Rusnak (1956), Cook and Gorsline (1972), Ludwick (1975), and Lavelle and ten others (1976).

The editors have made a laudable attempt, in the final sections of the volume, to emphasize the 'synergism . . . between the fields of classical geology and physical oceanography.' Unfortunately, these sections are the least successful: the 'benchmark' status of many of the papers is questionable; and

the collection lacks focus, with the four "substrate response" papers emphasizing (respectively) method, wave effects, tidal transport, and storm processes. In contrast, the first two sections of the volume provide a useful reference set of classic papers. Unfortunately, the collection as a whole is now seriously dated. It is, after all, seven years since the volume was published and the large proportion of newer papers selected at the time now becomes a weakness. Significant developments in the intervening years have included recognition of gravel-based systems as important and distinctive entities and very rapid growth in the literature on storm effects and associated deposits. I'm not sure that I would advocate a new volume (or revision of the present one) to accommodate these developments. While a collection such as this can facilitate access to some of the more important early papers, distillation of the newer literature may be better accomplished by timely and well-crafted review articles.

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Bermuda's Delicate Balance: People and the Environment, edited by S.J. Hayward, V.H. Gomez, and W. Sterrer, 1981. The Bermuda National Trust, P.O. Box 61, Hamilton, Bermuda, 402p. US\$ 8.50, ISBN 0-917642-20-1.

This book offers itself as a guide to teaching all of us how to live in partnership with our environment. This premise is based on Bermuda being an island with finite resources, above average wealth and population density, and sophisticated institutions. The authors state rhetorical questions such as, "If we cannot do it, who can?"

Indeed, after reading this book in its entirety, one could come close to the same conclusion. Fortunately for all of us, other countries (and islands) have begun to ask this same question for themselves. Thus, we may enjoy guides from Iceland, Hawaii, etc. pointing us toward their approaches to a sustainable partnership with our global environment. Even ancient guides, (the Bible) long ignored, would prove useful.

This book contains a large collection of relevant topics, fostered, no doubt, by its thirty-six authors living on an island. Their forced proximity and respective educations and experiences allowed them to make associations between people and the environment

that could be missed elsewhere. The twenty-eight chapters are divided into seven sections: People, Industry, Resources, Traffic, Wastes and Pollution, Conservation, and Values and Attitudes. I was impressed that the authors began their book with the assumption that "most environmental problems are caused by *people using resources*." Since the word resource implies that people give value to nature, this statement shows their recognition that people use nature through commerce to satisfy their legitimate (to them) wants. This assumption can be overlooked by scientists.

The format of each chapter within these sections usually includes a succinct history of the topic, present known facts, important benefits, hidden costs, certain ironies, and a set of pertinent recommendations. In general, the recommendations are pragmatic and are designed to fill the gap in information, and hence knowledge, about key facets of people and the environment in Bermuda. Therefore, the book has a wide appeal to holistic scientists, educators, general citizens, and managers. This book could well be used as a handbook for those interested in working toward the balancing of people and nature elsewhere.

A review of twenty-eight separate chapters is not possible here, so I have chosen one of central interest: Tourism. Tourism is often viewed as a panacea by "third world" countries today. Tourism in Bermuda began with an effort by Bermudians to promote their island via building their own hotels and ships. While originally benefiting the island through increasing the use of electricity and constructing a railroad and water supply, it later inundated the island with an annual tourist population then times the resident population. This on an island with almost 3000 persons per square mile!

Clearly, tourism generates wealth and many would consider it a "non-polluting" industry. However, tourism brings with it conflict impacting on Bermuda, whether originating from between tourist interests, between tourists and residents, or between tourists, residents and the environment. Some of these impacts include congestion of all forms, accelerated construction and consumption impacts, loss of traditional character, change in resident aspirations, changes in family living, resident resentment, and increased prices and economic vulnerability. The authors note two ironies here: increasing tourism will decrease the desired tourist amenities, and increasingly tourism is generated from other tourist destination countries where residents escape from their tourists. Where will Bermudians escape?