

ments. There are some laboratory simulations and several papers illustrate the possibilities of remote sensing techniques for identifying coastal and shelf currents. Overall in keeping with its "workshop" origin, this is a book for the specialist oceanographer rather than the general reader.

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The Geological Evolution of the River Nile, Rushdi Said, 1981. Springer-Verlag, New York, 151p. US\$ 59.00.

Since the days of Herodotus (484-425 B.C.), the Nile delta has been recognized as the principal site of sedimentation for the silts and clays carried downstream by the annual monsoonal flood. But this annual siltation came to an end with the completion of the Aswan High Dam ("Sudd al Ali"), and serious coast erosion is now in progress around the delta littoral. This volume does not deal with the latter question but presents the geological, archeological, and historical record of the Nile in Egypt which is essential to understanding the present-day situation. Natural, climatogenetic fluctuations of great magnitude are recognized since the establishment of its present course to in late Miocene. The author attributes the principal valley incision to the Messinian fall of sea level in the Mediterranean (although the uplift paralleling Red Sea rifting must have been important, but is not mentioned). Since then, the main stages are called: Eonile, Paleonile, Protonile, Prenile, and Neonile. The role of neotectonics is mentioned for some areas, but the lower course is essentially thalassostatic, *i.e.* controlled by the fluctuations of sea level. The shape of the delta shore and the loci of the distributaries is nicely illustrated in four maps (Figure 52), dating from Herodotus (c. 450 B.C.), Strabo (64 B.C.), Serapion (350 A.D.), and El-Idrisi (1154 A.D.).

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Fisheries Ecology, by T.J. Pitcher and P.J.B. Hart, 1982. Croom Helm Limited, 414p. US\$ 34.50.

This book is designed for senior undergraduates. This ambitious target is certainly achieved, as it brings together and discusses the important litera-

ture in fisheries management up to 1980. The subject was already treated by WEATHERLY's (1972) textbook and a new book in this field was urgently required.

My first doubt is about the title of a book on applied ecology where only 22 pages are devoted to the environment the fish live in. As ecology is a "partie de la biologie qui étudie les organismes animaux . . . en fonction de milieu naturel où ils vivent," (MANUILA, 1971), references to the habitat should be extended. This is probably why some citation classics (MANN, 1965) are not included in the book. Another study, which I believe will become a classic (LEGGETT and CARSCADDEN, 1978), demonstrating environmental impact throughout the zoogeographical distribution of the species on the plasticity of the interparity or semelparity advantages, deserves to be mentioned.

Although the authors excused themselves for not treating "the impact of fish behaviour on fisheries" (from preface) due to "lack of space," they should consequently realize that this will limit the readership among fishery biologists. It is a common problem of every text book to sacrifice depth or detail of the treated topic, but a stronger choice should have been made in several cases in this volume.

The first section deals with fish morphology and examples of fish communities are given. Although the 6 pages of broad description of changes during fish storage do not constitute the missing "fish behaviour" section, this part adds little to the section of World Fisheries. The real book starts when the authors deal with fish population structure and population growth parameters, which are the subjects familiar to their own research activities.

Genetic progress is a function of heritage selection intensity and phenotypic variance of the organism, so short sections of "heritability in fish" under the subheading, "Evolutionary Effects of Mortality," is a rather general casually treated overview.

The three chapters on recruitment, prediction of fishery yields, and models in fishery management are excellent, up to date, and perceptive.

The chapter on fish farming is a little removed from the main stream of the book, although several areas of intensive aquaculture could profit from more knowledge of fish ecology.

Two sections, namely "Fisheries Economy", and "Fisheries and Ecology of Man" present specific author's efforts to integrate overall fishery activity in the modern world and are worth reading.

There are some erroneous interpretations which

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