mental function, is true only if x is restricted to a finite region. Minor unimportant errors of this kind are easily spotted and corrected by an attentive reader. However, there is one serious error of omission. The student of this book has no way of knowing that the theory of distributions was created as a systematic mathematical discipline by Лоран Шварц, that without the contributions of this important mathematician chapter 39 of *Differential Equations of Mathematical Physics* would never have been written.

Scripta Technica and H. J. Eagle, the translation editor, are to be congratulated for providing a competent, readable translation.

One final remark. The price of $21, for a book that undergraduate and beginning graduate students should own, is sinful. I feel strongly that, if necessary, the governments of the Western nations should translate and publish such books so that students can purchase them at a reasonable price. Perhaps then the American student could buy this translation for the same price that his Russian colleague pays for the Russian original.

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British Rocky Shores

The Ecology of Rocky Shores. J. R. Lewis. English Universities Press, London, 1964. xii + 323 pp. Illus. 42s.

Popularized by the Prince Regent and romanticized by Gosse, the seashore is now the accepted place for summer recreation. It is also an area of great scientific interest, challenging to the ecologist and instructive to the student. Unfortunately, so far as these narrow margins between sea and land are concerned, the pursuit of pleasure and the pursuit of knowledge are not entirely compatible. In these overpopulated islands those parts of the coast that are still free of pollution are now in danger of being ruined for the naturalist by urbanization and the unintentional but constant interference that takes place during the summer months. Lewis's excellent work on British rocky shores is therefore most timely. It affords a detailed description of the marine life of the unspoiled rocky shore, dealing mainly with the northwest of Scotland and the west of Ireland, areas that are not fully accessible by the popular motor car.

Lewis, though himself a zoologist, follows the good tradition of marine biology in treating both animals and plants as equally important and interesting members of the intertidal communities. The introductory section describes two contrasting British shores, one sheltered from, and the other exposed to, wave action. He thus emphasizes not only the well-known pattern of vertical zonation but also the equally important influence of the force of the waves. It is regrettable that he introduces yet another system of names for the major littoral zones but, since his system is no more than a renaming of the widely applicable system of the late T. A. Stevenson, it need not cause confusion. There follows a discussion of the factors influencing zonation—namely tidal rise and fall, wave action, topography, and climate—and a consideration of the factors influencing geographical distribution.

In the main descriptive sections, Lewis classifies the shores of the open coast under three headings: those of moderate exposure dominated by barnacles; those of greater exposure dominated by mussels; and sheltered shores dominated by brown algae. Further chapters deal with specialized habitats such as rock pools, crevices, very sheltered lochs, and rapids. In the final section the author attempts to analyze the causes and foundations of the patterns of distribution of intertidal organisms; a stimulating feature of this section is his presentation of unsolved problems.

The book is beautifully illustrated throughout with original diagrams and photographs, and it contains much new information in addition to the valuable bibliographies at the end of each section. Both the author and the publisher are to be congratulated for bringing such a full and delightful book within the range of the students' means. Yet Lewis's enthusiasm and single-mindedness have led to the one major criticism that might be leveled against the work: the subject matter is treated in such minute detail, and in places with some unnecessary repetition, that the nonspecialist should be advised to dip into it, and not to attempt to read it from cover to cover. Had there been a little more discussion of zonation in terms of behavior, physiology, and life cycles, the book would have been more generally useful and certainly more readable. For the specialist, it provides a full and well documented account of the present knowledge of the biology of British shores, and deserves a place in the libraries of all universities and schools that encourage the study of ecology.

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Hormone Action

The Biochemical Aspects of Hormone Action. A symposium held at St. Louis, Missouri, in 1962. Albert B. Eisenstein, Ed. Little, Brown, Boston, Mass., 1964. xvi + 240 pp. Illus. $8.50.

This volume contains ten essays that were read at a symposium held at the Jewish Hospital, St. Louis, Missouri, late in 1962. Each essay is substantively a review of some phase of the essayists own work with enough interweaving of ideas and hypotheses, provided in part by comments of the audience, to make the volume as a whole pleasurable and stimulating to read. Since the essayists include H. Rasmussen, C. R. Park, C. H. Li, I. L. Schwartz, A. Leaf, E. W. Sutherland, P. Talalay, G. M. Tomkins, and O. Hechter, the sampling of thought in the area of hormone action is wide for so small a volume.

Vasopressin is particularly well covered by Schwartz, Rasmussen, Marc-Aurele, and Christman, who describe in detail experiments on the sulfhydryl-disulfide interchange reaction with rat kidney and toad bladder, and by Leaf, who reviews the effects of vasopressin on sodium transport and membrane permeability. Also of special value is the essay in which Park and his colleagues review a substantial part of the work of the Nashville group on the effects of insulin on transport in heart muscle and include a description of techniques as well as a clear exposition of their views.

Hechter, Emberland, and Yoshinaga provide a useful compilation and discussion of the various effects of insulin on isolated, rat diaphragm muscle, a description of their attempts to demonstrate insulin modification of spatial relationships of the proteins of dia-