variable and super-normal dispersion) which require a periphrasis or additional explanation in Russian. The author deals with these difficulties in a competent manner, reducing such explanations to a minimum, and without straying into unnecessary digressions.

Statistical vocabulary is a particularly difficult field for the lexicographer dealing with Russian. Professor Kotz has solved the problem in a generally competent manner, concentrating on a readership of professional statisticians, and omitting those terms which belong to general mathematics rather than statistics. The user is clearly assumed to have a good knowledge already of the Russian language; no grammatical indications, such as the gender of nouns or the paradigms of irregular verbs, are given. It is not a book for the beginner, either in statistics or in Russian. For the Russian-speaking statistician, however, who requires a useful compendium of the most commonly used statistical terms in a relatively compact form, it should prove a most valuable addition to his working library.

VERA RICH

Plant Morphology

Shoot Organization in Vascular Plants. By K. J. Dormer. Pp. 240. (Chapman and Hall: London, March 1972.) £4.50.

THIS book is not primarily about morphogenesis, as the title might lead one to think, but more about the morphology of the mature angiosperm primary shoot. The author has "tried to set down some of the more widely applicable principles governing the growth and behaviour of the shoot system" as illustrated by selected examples, with quantitative data where possible. The examples are all examined critically, often at length. The book is aimed at advanced and postgraduate students.

The author excludes consideration of the early stages of development from the meristem and excludes almost all, except simple, experimental work. This approach results in the first chapter, on "the initiation of new shoots", being almost entirely about the regeneration of plantlets on mature leaves. The initiation of shoots from axillary buds or cultured tissues is ignored. The chapter on the measurement of growth is perhaps the best part of this book. The common types of growth curves are clearly explained and the value and limitations of the plastochron index as a developmental time scale are carefully examined. Other chapters cover some aspects of the later stages of leaf

development, the measurement of phyllotaxis, heteroblasty in leaves, the structure of the primary vascular system, and asymmetries such as anisophylly and unequal buds. In considering "the shoot system in its environment" the author rightly points out that the effects of mechanical stress on morphology have tended to be neglected, and he gives some examples of these effects. Gravimorphism in trees, however, is ignored. There are other gaps. There is virtually no mention of apical dominance, and very little about plants showing secondary growth, or about the effects of growth substances on morphology. The author seems to have been too often at pains not to "follow the fashion" and to have included material simply because it has not appeared elsewhere. It is otherwise difficult to see why some poor data are included (as in the lengthy discussion devoted to epidermal cell lengths in two plants, one etiolated, one not) in preference to much better data which are ignored. Especially in view of the quantitative approach it is disappointing that of the thirty or so graphs only two have units on both axes and that four have neither axis labelled with anything at all.

This book is well produced and singularly free of minor errors. Its value would have been enhanced by reference to topics and papers not otherwise touched on, for, as the author says: "I hope that none will be so misguided as to see in my own imperfect text a substitute for the diligent examination of original papers".

R. F. LYNDON

Revised Relativity

The Theory of Relativity. By C. Møller. Second edition. Pp. xiii + 557. (Clarendon: Oxford; Oxford University: London, March 1972.) £13.

READING this book is what it must be like to be conducted through some great forest by a guide who knows every inch of the ground. We soon discover that Professor Møller is quite sure where he is taking us. He may seem to keep leading us into glades and thickets, but every time he gets us to precisely the place where he wants us to be, having skilfully avoided various obstacles on the way. He keeps our feet on the ground and gives us an extensive exploration at that level. He invites us neither to investigate the roots very deeply nor to ascend to the tree-tops whence we might gain a more expansive view—and however precarious that might be, most of us would want to take the risk.

The book may be described as an up-to-date account of "classical" relativity

theory. Almost half of it is a thorough presentation of the special theory. The rest is a careful account of the general theory regarded, naturally, as principally a theory of gravitation. Møller's viewpoint is conveyed by the titles he chooses for his chapters. For example, chapter 10 on particle mechanics, light-propagation, mechanics of continuous media, electromagnetism, in general relativity he calls "The influence of gravitational fields on physical phenomena"; chapter 12 on classical and modern tests of the theory (in the discussion of which Møller has played a leading part) as well as on the rudiments of relativistic cosmology, he modestly calls "Experimental verification of the general theory of relativity. Cosmological problems".

Møller's book is more justly regarded as a book of 1972 than as the re-issue of a book of 1952. An indication of this is the fact that the valuable bibliography, itself a new feature, includes about 100 items that have appeared after the earlier edition was written. Most of the new material is in the part of the book on general relativity; there are critical accounts of such "modern" topics as gravitational radiation and black holes (in particular, the "Kerr solution"). Another innovation is the presentation of some material as "exercises" in the text, mostly with an indicated solution.

Møller still intends his book to be a "textbook for beginners in the field". A beginner would have to be very bright indeed to work through the book on his own, but under the guidance of a knowledgeable teacher he will find it of much value as a textbook and probably even more as a work of reference. In this regard, it will be valued particularly for the wealth of material that is not treated elsewhere at textbook level. Of course, even at that level, Møller has had to exercise much selection so that, merely as examples, he has less to say about the relativistic treatment of "rigid" bodies and of rotating bodies, compared with other topics, than might have been expected. But the book is already half as long again as the first edition, and it is probably best that Møller should have to some degree given more attention to topics that have been of particular interest to him in his long career of distinguished work in relativity. Indeed, the above-mentioned beginner, and all other relativists as well, are fortunate that Møller has provided this substantial and systematic account of his work on so many of these topics. Moreover, it is hard to see how anyone can properly appreciate the motivation of the modern more abstract general formulations of relativity theory without having first mastered much of the material here presented.

W. H. MCCREA