It also contains additions and corrections to both volumes, general indexes to Arabic, Hebrew and Latin names, and outline black and white maps, indicating the position of many of the localities quoted.

It is unfortunate that the keys are not uniformly constructed and that they are frequently incomplete. The first purpose of a flora such as this should be to enable the student to identify plants native to the country with the greatest possible ease and accuracy. Concise dichotomous keys leading to single species, not merely to groups of often 'critical' species, are a great help to identification, and their construction tests the validity of the author's taxonomy. Another criticism which can be brought against the book under review is the poor drawing and reproduction of many of the figures.

On the other hand, the new edition of the flora will be of great use to botanists studying the plant-life of the Nearer East, since it includes so many recent discoveries of new species and varieties and extended distributions. W. B. T.

Uncle Joe's Nonsense : for Young and Old Children. A Medley of Fun and Philosophy reported by J. W. Mellor. (Published for the Ceramic Society.) Pp. xii+231. (London, New York and Toronto : Longmans, Green and Co., Ltd., 1934.) 12*s*. 6*d*. net.

THERE is more than a touch of the Carrollesque about this delightful foil to Dr. Mellor's chemical publications. Here we encounter the author of the monumental "Comprehensive Treatise on Inorganic and Theoretical Chemistry" (in thirteen volumes and still running) in his hours of ease—which appear to be more numerous than many students of chemistry have suspected ! The book is one of airy persiflage, full of the pert and nimble spirit of mirth, dedicated appropriately to nieces and nephews in New Zealand, and forming a delicious *pot pourri* of ornithological studies, journeyings by land and water, lessons in dancing, and other 'trifles'.

"Why is the ship called *Laconia* ?" The unsuspecting questioner caught a tartar, for in his reply the author of the "Comprehensive Treatise" traced the word conscientiously "through *lacus*, a lake, to a ship sailing on water, not in air. I supported my derivation by quoting analogous cases : *gramophone*, from the Greek *gramo*, I speak, *phono*, through a tin tube ; *virgin*, from the Latin, *vir*, a man, and *gin*, a trap—a man-trap ; and *husband*, from the Old English *hussy*, a woman, and *bond*, a tie—tied to a woman . . . I also added that the ship was called *Laconia* because *Laconia* was its name. I had in mind the boy who asked one of the keepers at the Zoo why the lions in his charge were called 'lions', and who received the illuminating answer, 'Because lions is what they are'."

The book abounds in clever verses and ingenious drawings. It will convince all who have the good fortune to read it of the fallacy of the idea that the man of science is necessarily devoid of humour and humanism and incapable of expressing himself in the common tongue, and for this reason in particular we welcome its publication. J. R.

A Text Book of Applied Hydraulics. By Prof. Herbert Addison. Pp. xii+409+24 plates. (London : Chapman and Hall, Ltd., 1934.) 21*s*. net.

IN general, this work covers the usual field of modern textbooks on hydraulics, commencing in part 1 with a brief account of the fundamental principles of hydro-mechanics and proceeding in part 2 to deal with the practical applications of the subject to pipes and pipe systems, open channel control, hydraulic turbines and pumping machinery. The book has been designed for three classes of reader : the general student ; the electrical practitioner, within whose province it falls to be familiar with the performance of pumps and turbines rather than with their mechanical details ; and the specialist in water supply, irrigation and the construction of pumps and turbines. For the first of these classes, part 1 has been provided together with a number of worked out examples. These examples with their solutions occupy a considerable section of the book (64 pages) and are a valuable feature. The second class will find their needs specially catered for in part 2, while the third class may be expected to gather from the principles enunciated throughout the book a reliable basis for the study of more detailed treatises.

The rapid expansion of the use of hydro-electric power has led to important developments in turbine design, and units of very considerable horse-power are now in operation. Two chapters are devoted to a consideration of the construction and performance of hydraulic turbines. These give a serviceable comparison of the leading types, and there are useful diagrams of turbine performance and characteristics. The volume concludes with a chapter on hydraulic measurements. B. C.

Liquid Dielectrics. By Dr. Andreas Gemant. English translation by Vladimir Karapetoff. (National Research Council Committee on Electrical Insulation, Monograph No. 2.) Pp. ix+185. (New York : John Wiley and Sons, Inc. ; London : Chapman and Hall, Ltd., 1933.) 18*s*. 6*d*. net.

DR. GEMANT'S monograph will be of value to all research physicists and engineers. He discusses first the resistivity, and dielectric constants of liquids, pointing out that as a rule the higher the resistivity the smaller the dielectric constant. From the practical point of view, it seems a pity that nearly all liquid dielectrics are organic substances, as inorganic compounds are generally much the more stable. The thermal, mechanical and optical properties of liquids are discussed and also their behaviour in an intense electric field.

The liquid dielectric most frequently used in electrical engineering is a mineral oil, and in high voltage cables it may be subjected to the most intense electric stress for many years. The motions of the oil in the cable due to variations in its temperature caused by change in the load sometimes cause empty spaces in the cable and so considerably weaken its resistance to electric stress. To prevent this, the use of a lighter oil in place of the heavy impregnating compound is being tried.