These two issues of the Henry Ford Hospital Medical Bulletin are devoted to papers from the Orthopedic Research Laboratory of that Institution. Dr Harold Frost appears either as sole or co-author of each of the twenty-two papers—a remarkable feat reflecting the energy and enthusiasm with which he invests his studies. Some of the papers are concerned with different aspects of the morphology of bone using fresh undecalcified sections prepared by a simple technique which Dr Frost has developed; others with the measurement of rates of bone formation as revealed by tetracycline markers.

These papers contain a wealth of information on normal bone such as the number of osteocytes per unit volume of cortical bone, the percentage of bone volume which is occupied by the lacunae and the amount occupied by canaliculi (which surprisingly is almost twice the former figure). Osteoid has been found in normal bone at all ages, although the number of osteons containing osteoid diminishes from 10 per cent at the age of five to less than 1 per cent in adult life.

The examination of bone from a number of patients whose bones had been labelled by tetracyclines at known intervals before biopsy or autopsy has allowed calculation of rates of bone formation within an osteon which averages 0·9 micron per day. New bone formation was found to be suppressed in patients receiving cortisone therapy. Several papers describe some interesting properties in the " halo " of bone immediately surrounding the osteocyte, which throw some light on the metabolic activity of these cells. These are but a few examples of the mass of interesting information which is contained in these issues.

It is perhaps unfortunate that this work, which is so largely concerned with one or two basic topics, should be broken up into so many short articles. This has led to a great deal of repetition and an unnecessary separation of observations and ideas which would be easier to follow if collected in a more logical fashion. One might criticise Dr Frost also for a general tendency to refer largely to his own work while ignoring many important and highly relevant contributions of others on subjects which he discusses. However, these criticisms do not detract from the very substantial contributions contained in these papers and while one may disagree with some of the conclusions which Dr Frost draws from his observations, no one could read them without being immensely stimulated and instructed.—John CHALMERS.

Radiographic Atlas of Skeletal Development of the Foot and Ankle. A Standard of Reference. By Normand L. HOERR, Ph.D., M.D., S. Idell PYLE, Ph.D., and Carl C. FRANCIS, M.D., the Department of Anatomy, Western Reserve University School of Medicine, Cleveland, Ohio. 11¼ × 9 in. Pp. xv + 163, with many figures and tables. 1962. Springfield, Illinois: Charles C. Thomas, Publisher. Oxford: Blackwell Scientific Publications. Price 76s.

Few books are conceived over thirty years before their first edition is offered to the purchaser. This radiographic atlas of the development of the foot and ankle originated in a systematic collection of data by Professor Wingate Todd, Professor of Anatomy at the Western Reserve University. Work was commenced in 1928 and was later continued by his successor, Professor Normand Hoerr, who also did not survive to see its publication.

The basis of the survey rests on a radiological study of the ossification and outline of the foot in 515 boys and 484 girls whose feet had been radiographed at three, six or twelve months intervals from birth to eighteen years. Selection was made from a larger collection of nearly 4,500 children who were examined.

The atlas is divided into three parts. The first part is concerned with method of study, definition of the terms used, assessment of bone growth, and the design of the standard of reference. The standard of reference used rests upon the state of ossification and the recognition of so-called maturity indicators which are defined as the appearance of recognisable osseous characteristics peculiar to the individual bone considered. The second part of the book presents in detail the appearances of a standard foot and ankle at different ages ranging from birth to eighteen years. This standard foot has been selected from the mean of 100 children of the age considered. The final section is made up of line drawings of individual bones made from the standard of reference to illustrate the maturity indicators present.

The authors have provided a monumental reference book for those who are especially interested in the detailed development of the foot. The atlas is well illustrated and beautifully produced. No index is provided but the table of contents is quite comprehensive. It is a pity that the language of the text is often ponderous and verbose. " The tangibility of contour markings provides a degree of definiteness that is especially reassuring when one is summarising a child's skeletal developmental status." Is it really necessary to put it quite like this?—F. PYGOTT.