been rewritten and enlarged. In chapter 6, a section on chromosomal anomalies and malformations has been added in order to summarize the large amount of work in this field published since 1958.

Additions have also been made in the chapter on inborn metabolic and allied disorders. Other sections of the book remain virtually unaltered. This applies to the excellent chapter on developmental vestiges, heterotopia, hamartomas and hamartomatous syndromes, embryonic tumours, and metaplasia. In an appendix, Professor Willis gives his suggestions for further research.

The book contains a wealth of factual information and illuminating speculation, set forth in the lucid and incisive style so familiar to readers of Professor Willis' other major work *The Pathology of Tumours*. In the preface to the first edition the author expressed his conviction that 'pathologists need to know more embryology and embryologists more pathology'. Not only pathologists and embryologists, but workers in almost every branch of medical science will find this book to be of continuing interest and value.

N. F. C. GOWING

GYNAECOLOGICAL PATHOLOGY By Magnus Haines and Claude W. Taylor. (Pp. vi + 519; 515 figures. 90s.) London: J. & A. Churchill. 1962.

The authors hope that this book will be useful to general hospital pathologists, whose biopsy services in most hospitals in this country include a great deal of gynaecological material. I have no doubt that their hope will be justified. Their coverage of the subject is complete and well balanced, with no riding of personal hobby horses. They provide clear factual descriptions, copiously and well illustrated; the photomicrographs in particular are well chosen and of high standard technically, a most important element in the practical usefulness of such a book. General pathologists will certainly find it helpful and reliable in their day-to-day biopsy problems.

The authors hope equally that their book will be of service to gynaecologists, especially those who teach and those who are in training. Again I am sure that they are justified. Surgeons, after a phase of somewhat exclusive absorption in physiology, are now returning to their earlier appreciation of pathology; the neurosurgeons and the thoracic surgeons never lost it; and the gynaecological surgeons, though somewhat dazzled by the competing lights of endocrinology, have a reasonably honourable reputation for fidelity to pathology. In short, there should be a demand for this book among clinicians; and they will find it very useful. The attitude of the book is one of constant awareness of the clinical significance of pathology.

Outside purely factual matters the presentation is not very forceful. Possibly this is a result of dual authorship; it is usually more difficult to make up two minds than one. Repeatedly, on controversial issues opposing views are cited with a minimum of critical appraisal. The reader is left to decide for himself. Admittedly he is given every help to do so by the excellent bibliography, which is full and apposite. But the reader who is not himself a specialist in gynaecological pathology may wish that they had presumed to make his mind up for him.

In what is perhaps the most controversial part of their field, the histogenesis of ovarian tumours, their approach is not so much non-committal as conservative. Whether this is good or bad is a matter of opinion; and as a general pathologist I do not feel qualified to take sides. But this section of their book will stimulate heat among the more radical ovarian experts.

The book is written in a clear and acceptable if not notably elegant style; and I have found no misprints.

A. C. P. CAMPBELL

AVIATION ACCIDENT PATHOLOGY By J. K. Mason. (Pp. xvi + 358; 84 figures. 90s.) London: Butterworth. 1962.

This book is a valuable contribution to a speciality which at the time the book was conceived was still in its infancy. In fact it is not very long ago when far greater interest was shown in the fragments of the crashed aircraft than in the remains of its occupants. The information included in the book is the result of the collection of material with meticulous care (often carried out under the most difficult circumstances) and after painstaking pathological investigation and correlation of the results. Nevertheless, that such patience can have its reward is reflected in the calibre of the book itself, which shows a critical approach to the problems which the author seeks to solve, and by its example should stimulate others, for much still requires to be done. As the author himself admits, there still remain many questions to be answered, but his observations have underlined many of the difficulties as well as setting a standard of careful and systematic approach. At the same time, he makes no attempt to disguise the fact that on many occasions it is quite impossible to be completely certain of the interpretation of pathological lesions found in bodies which have been subjected to a variety of changing conditions, before, during, and after death.

Although it is obvious that if advances are to be made, this work is not for the casual operator, at the same time it is equally true that it must demand close cooperation between what is called specialist on the one hand and the general practitioner on the other. It certainly should be available to all those who practise forensic pathology, and in all reference libraries. The production is above criticism.

FRANCIS CAMPS

PROTHROMBIN By Walter H. Seegers. (Pp. xxvi + 728; 26 figures; 23 tables. 120s.) Cambridge, Massachusetts: Harvard University Press; London: Oxford University Press. 1962.

The title of this monograph will be misleading for those readers not conversant with singular contributions to the literature of blood coagulation made by Seegers and his associates. This is, in fact, a book involving nearly all the known aspects of coagulation, excluding fibrinolysis. In Seegers' view the conversion of prothrombin to thrombin involves thrombin as the only known enzyme. Other substances, which he terms procoagulants, play only supportive roles.

Seegers and his colleagues have attempted to study

coagulation and its disorders by the chemical isolation of so-called 'pure' clotting factors. A good deal of the argument centres on whether this has been done by Seegers and others who have tried to reproduce this work, and on the validity of the resulting conclusions.

The orthodox 'coagulationist' and routine haematologist will experience great difficulty with Seegers' terminology. He employs a system of nomenclature based on his own knowledge and experience with pure products. He does not readily concede common ground with the accepted international system of coagulation nomenclature or other pseudonyms widely used. He does not identify factor VII with autoprothrombin I because he states that he does not know what factor VII is.

The chapters on antithrombins, clot retraction, and his re-examination of the original cases of several of the recognized coagulation disorders make fascinating reading. The constant variation between the third and first person and the somewhat irrelevant admixture of philosophical quotations from the poets are, however, very distracting in a scientific work of this type. An example of his dogmatism is his rejection of the validity of the two systems of prothrombinase production. On this he writes:—

'In 1955 the concept arose, first in Oxford, that there are two different systems for the generation of prothrombinase in the body. I do not think there can be systems for generation of what does not exist; namely, prothrombinase.'

The statement which often recurs that Marcoumar has no effect on factor IX (autoprothrombin II) is hard to accept.

This is a useful, informative book for those interested in coagulation chemistry but its value to the general reader must be very doubtful.

L. POLLER

ELECTRON MICROSCOPY *British Medical Bulletin*. (Pp. ix + 179-254; 32 plates. 35s.) London: British Council. 1962.

This survey of current knowledge and developments in electron microscopy in relation to medical science is warmly recommended to all pathologists. Inevitably its

appeal will be more directly to academic workers who can discern possibilities of assistance with research problems, but it is equally fascinating to indulge in hypothetical extrapolation of the observations reported and consider where they can and will reach into the realm of diagnostic pathology. E. H. Mercer's account of the cancer cell, M.S.C. Birbeck's study of melanocytes, and the particularly beautiful work of S. J. Holt and R. M. Hicks on enzyme localization all have obvious links with hospital pathology, but it is perhaps unfortunate that the opportunity was not taken to survey the successful studies on human renal biopsies.

Microbiologists are particularly well served by excellent accounts of virus structure (M. A. Epstein), the viruses of tumours and warts (A. F. Howatson), virus structure studied by negative-staining techniques (R. W. Horne and P. Wildy), and bacterial structure (Audrey M. Glauret). These and many other topics cannot fail to provide interest and enlightenment, not only to those with access to electron microscopes but also to all who habitually use more modest instruments.

T. CRAWFORD

CORRECTION

The review of a book entitled 'Ionizing Radiation' and published in the Journal for September, 1962 (*J. clin. Path.*, 15, 488) was written by H. E. M. Kay and not by N. G. Trott.

THIRD SYMPOSIUM ON ENZYMES IN CLINICAL CHEMISTRY

A symposium on multiple molecular forms of enzymes and their use in clinical diagnosis will be held at the New Academic Hospital, Ghent, Belgium, on Saturday 27 April 1963. The meeting will begin at 10 a.m. and end at about 6 p.m. Fee (including lunch) 100 Belgian francs (about 15s.). Readers interested in attending this meeting or in making a short communication are asked to write to: R. J. Wieme, Laboratory of the Medical Clinic, University of Ghent, Pasteurdreef 2, Ghent, Belgium.