

glad that the letter has been published. The aim of the letter is primarily to explain the theory of art which Prof. Smith himself holds. He points out that any criticism of art requires a ground for criticism, and that this, again, requires a theory. The writer holds such a theory and begs leave to present it to his friend. The theory is not his own, but that of a master, but he holds it none the less sincerely for that and hopes that it is, first, intelligible and, secondly, acceptable. The theory is, of course, that of Gentile, and the letter is a clear exposition of the Italian master's views on art. This we refrain from criticising, but we admire and commend both the matter of the letter and the spirit which prompted the writing of it. Those who have any interest, either in letters or art, will thoroughly enjoy the reading of it.

*An Introduction to the Study of Heredity.* By Prof. E. W. MacBride. (Home University Library of Modern Knowledge.) Pp. 256. (London: Williams and Norgate; New York: H. Holt and Co., 1924.) 2s. 6d. net.

OUR knowledge of heredity has long since passed the stage when it could be summed up in a few simple aphorisms such as "like begets like." During the past thirty years especially, many diverse lines of approach have been explored; biometry has attempted the measurement of likeness, cytology and experimental embryology have unveiled some of the mysteries of begetting, and Mendelian research has given one answer to the question why like sometimes begets unlike. To sketch an intelligible outline of the results obtained in these varied fields and to present them in ordered and logical sequence is no light undertaking; to compress it within the space of 250 pages might well seem impossible. Prof. MacBride, however, is an experienced teacher, with a gift for lucid and forcible exposition, and this little book is well fitted to arouse interest and to stimulate the reader to further study.

In such a survey it is impossible, even if it were desirable, to avoid some degree of dogmatism, and Prof. MacBride maintains his own point of view with vigour and occasionally with a touch of asperity. Some may think that he gives too easy credence to the claims of the Vienna school, or that he overestimates the adequacy of Tornier's hypothesis of "germ weakening" to account for the origin of mutations, and specialists in various fields will doubtless detect minor inaccuracies. It is a little difficult to reconcile the statement on the last page, "The study of biology teaches unequivocally that all progress in the animal world has been brought about by natural selection," with the tenor of some earlier passages, notably on page 138.

*Entdeckte Verborgenschaften aus dem Alltagsgetriebe des Mikrokosmos.* Von Prof. Dr. Paul Lindner. Pp. viii + 291. (Berlin: Paul Parey, 1923.) 6s.

PROF. LINDNER'S book is a comprehensive treatise on a great variety of sciences that require the microscope as their principal instrument of research. It deals in a discursive way with the structure of the eye, the history of the microscope, the manufacture of leather,

the brewing of beer, as well as with the biology of the common microscopic animals and plants, and with many other topics. As might be expected in a book of such wide scope, the quality and treatment of all the subjects dealt with is not consistently good. Many readers will be glad to have in a convenient abbreviated form the results of the distinguished author's researches on the fermentation processes, and the chapters dealing with the biology of wine making, of brewing, on the bacterial decomposition of the food in the alimentary canal, on the formation of honey dew, and many other examples of interesting symbiotic relations between animals and plants, are all excellent.

In other chapters the information given in the text is not trustworthy. The larvæ of the ox warble fly are not transferred from the legs to the œsophagus by the tongue as stated on p. 259, but, as proved by Carpenter, penetrate the skin and find a passage through the tissues to the alimentary canal. The principal cause of infestation by miners' worms (*Anchylostoma*) is not by drinking polluted water. The names of some of the most prevalent parasites and pests need revision. There is no justification, for example, for the retention of *Distomum hæmatobium* and *Musca vomitoria*, for the Bilharzia parasite and the blow-fly respectively. Many of the figures in the text are so small and so badly printed that they are misleading instead of helpful to the reader.

*Ordnance Survey Professional Papers.* New Series, No. 7. *Air Survey and Archæology.* By O. G. S. Crawford. Pp. 39 + 13 plates, 5 diagrams + 2 maps. (Southampton: Ordnance Survey Office; London: H.M. Stationery Office.) 5s. net.

IN recent years field archæology has received an unexpected but very valuable addition to its apparatus of investigation, in the shape of air-photography. In suitable country, especially in the down land of southern England, we can look through the veil of the past and see on the air-photographs the dim traces of a long-vanished race; we can detect the lines of field-boundaries and lynchets, of roads and earthworks, all invisible to an observer on the ground. It is shown by Mr. Crawford, in the volume before us, that not only can the features above indicated very often be discovered by means of photography, but also that it is possible to draw from the photographs important inferences as to the relative ages of the earthworks. Mr. Crawford deals particularly with the period of Celtic occupation of England, which may, in his opinion, have begun about 450 B.C., and, no doubt, lasted until the final disappearance of the Romans about A.D. 450. An examination of the air-photographs shows a network of field boundaries, banks and roads associated with upland villages; some of these were certainly in existence at the coming of the Romans, and some certainly persisted until their departure.

All who are interested in the history of rural England during this long period of some thousand years will find this publication well worth studying; it is admirably produced and illustrated, and incidentally shows the reconstruction, from air-photographs, of the eastern branch of the Stonehenge Avenue leading down to the river Avon.