

serum into pregnant white rats and rabbits. Later the sera of the fowls were tested by a complement fixation reaction and methods were adopted that gave a high measure of sensitization. Incidentally it was noticed that when a fowl's serum was rendered sensitive, say to rabbit lens protein, it also gave a positive reaction with that of an ox, sheep, pig, rat or fowl, thus furnishing additional evidence of the organ specificity and not species specificity of this protein. In not one of the experiments cited was a positive result attained. An interesting result, however, occurred in one of the control animals. This was a well-developed doe which was mated to a Belgian buck and was given 5 c.c. of salt solution intraperitoneally every three days after the tenth day of pregnancy. She had a litter of four which grew well but were unable to open their eyes. The lids were therefore opened and the conjunctival sacs were found to be filled with sterile cell debris. The corneae were atrophic and partially opaque, while the lenses were all densely cataractous; this latter condition persisted, though in two cases the cornea cleared. Later, the young all contracted snuffles and died. The doe was again mated to another buck and had a litter of five, two of which had bilateral cataract, the whole litter dying before they could be bred from. The doe was again mated but died of a brain abscess. In order to attack the subject from a different aspect, a series of twenty rats were successfully injected with the tubercle bacillus by injection into the anterior chamber. Six weeks later a complement fixation test was positive for about half of the series with both rat and rabbit lens antigen. Some of the rats died from generalized tuberculosis, but 48 of the first generation of progeny were obtained and not a single eye defect was found nor has any appeared in subsequent litters.

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BOOK NOTICES

Slit-lamp Microscopy of the Living Eye. By F. E. Koby.
Translated by Charles Goulden and Clara Lomas Harris.
London: J. & A. Churchill. 1925. Price 10s. 6d. net.

Two years ago the British oculist who wished to study the microscopy of the living eye was handicapped by the lack of a book dealing with the technique of the slit-lamp in a simple manner. There was nothing to be found in the journals written in English, and the German articles were quite unsuitable for one ignorant of

the elementary facts of the subject. Vogt's atlas did not pretend to give instruction in the practical details of the slit-lamp and the best methods of using it, and the English edition was out of print. The sole source of information regarding technique was Koeppé's book, but this is a ponderous work, and much reading was necessary before the few simple facts desired could be found. Koeppé's work is incomplete and out of date, for it does not include the lens, a most important chapter, and localisation with the narrow beam is not mentioned. The whole book is devoted to the pure microscopical side of the question, and even here much of Koeppé's work has not been corroborated by later workers.

The slit-lamp is not an instrument that can be used without instruction either oral or from books. Not everyone can attend a course on the slit-lamp; many are perforce restricted to the written word.

Koby's book fills the gap, and will be received with gratitude by a large number of ophthalmologists anxious to take advantage of the latest method of examining the eye. Those who do not read French fluently owe a debt to Mr. Goulden and Miss Harris for the labour they have expended in rendering Koby's work into English.

We have nothing but praise for the manner in which Koby has treated a difficult subject. He has presented us with a clear explanation of the theory and practice of slit-lamp microscopy, and his book, together with Vogt's atlas, will enable many to master the instrument even without oral instruction, although it is very desirable to obtain practical help whenever possible.

The sole criticism we make is that we feel that the author has not been quite fair to the methods of examining the deeper parts of the vitreous, the iridic angle, and the retina, with the aid of the contact-glass and a modified slit-lamp. It is not necessary to use a microscope with a single objective: by suspending the slit-lamp from a suitable gallows Gallemaerts and Kleefeld have been able to utilize the ordinary microscope. I have had the opportunity of seeing the apparatus in use at Brussels. Dr. Kleefeld called an ordinary refraction case, a girl of about 18. He slipped the contact glass in without any cocain and we were able to obtain a perfect view of the retina with the ordinary nitra lamp. The patient assured us that she did not feel the slightest discomfort. The gallows costs about £5 and can be adjusted to the ordinary apparatus without alteration. A special mirror is necessary. Koeppé has written a long book describing the minute anatomy of the retina as seen by this method and probably not all that he describes is wholly devoid of value.

Chapter I deals with the construction of the slit-lamp and the eye microscope and describes them in simple language without any complicated optics. The original Gullstrand setting is explained

and is contrasted with the modern Vogt adjustment. It is only rarely that Gullstrand's method is employed. The path of the rays is shown by photographs.

Chapter II, a very important one, considers the various methods of illumination, and discusses the vital subject of localisation.

Chapter III is devoted to the phenomena of reflexion from the ocular surfaces and contains interesting photographs of the catoptric images from the cornea and lens. Attention is drawn to the projection of shadows. This chapter is mainly theoretical but is of importance, for confusion may result from failure to recognise these reflected images.

Chapter IV begins the practical clinical side of the work with a study of the normal and modified conjunctiva.

Chapter V is given over to the cornea, normal, senile and diseased, and to the description of the corneal "prism." This we consider to be a better term than that chosen by the translators "parallelepiped." This is an awkward mouthful. Naturally the illuminated block is not really a prism nor is it a true parallelepiped. The literal translation of the German "prisma" is more euphonious and has received general acceptance.

The normal cornea, the changes that take place in old age, and the various pathological conditions, receive adequate attention. Of especial interest is the full account of the various types of pigmentation in the cornea including that rare condition, the Kayser-Fleischel ring in Kinnier Wilson's disease.

Chapter VI contains important details regarding the anterior chamber with its normal and abnormal contents and the convection currents of the aqueous.

Chapter VII deals with the iris. The normal iris with the changes met with in senility and disease are described.

We rather regret that the translators have decided to use the term "collarette" as an equivalent of the French "collerette," and for two reasons. One is that we have a sound English word "frill" which is an exact translation and fully meets the case. Another is that some Belgian writers have employed the French word to describe the pupil margin and so there is an element of confusion. In the circumstances it seems better to abandon collarette and call the region of the circulus minor the "frill." While upon the subject of translation we may point out that the word "lustre" does not generally suggest the appearance seen in a cat's eye. We feel that "*chatoie*" would be better rendered as "iridescence" which implies colour, rather than as "lustre," which in its common use suggests brightness and splendour. When a lady's eyes are called "lustrous" the comparison with the feline organ is not implied. We hope that the translators will forgive these minor criticisms of their painstaking labour.

Chapter VIII unfolds the modern conception of the anatomy of the lens introducing the reader to the zones of discontinuity, the reflecting surfaces, and the suture systems. In reading this chapter we regret that the great cost of illustrations has precluded their extensive use in circumstances where they would be very valuable. Various types of cataract are noted, many of recent discovery. The slit-lamp has compelled us to reclassify cataract and many new varieties have appeared. We draw attention to those associated with nervous disease, Mongolian idiocy, myotonia atrophica, and the like. The special form due to the retention of copper in the eye is described and illustrated.

Chapter IX completes the book with a full account of the normal and degenerating vitreous. Our knowledge of the changes that occur in old age is due almost entirely to the slit-lamp and the fact that infiltrations are seen in the vitreous some days before more general signs of sympathetic ophthalmitis is one of the most precious gifts afforded us by the new instrument.

Koby's work should be read by all ophthalmic surgeons whether they use slit-lamps or not, for the book is full of new facts and describes methods of illumination which are not confined to the slit-lamp but can be employed with far humbler apparatus.

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The Extra Pharmacopoeia. By MARTINDALE & WESTCOTT. 18th edition. Vol. II, 8vo, pp. 42 and 728. London: H. K. Lewis & Co., Ltd. 1925. Price 20s. net.

The first volume of this invaluable work was noticed in our pages in January of this year, p. 41. The second volume deals with analytical, experimental and research work. It contains a mass of facts, and though perhaps not so useful to the busy practitioner as the first volume, its preparation must have entailed an enormous amount of work, and with the daily increase in importance of biological chemistry in medicine, its value to the research worker will be undoubted. We, as ophthalmic surgeons, will sympathize with the authors in their statements in the preface, under cocain—"We have no interests in the manufacture of cocain, but we fail to see why there should be any interference with its correct medicinal use."
