
(4) v. Sántha examined anatomically the optical system in a male who, through an injury to the optic nerve, had been totally blind in the right eye for thirty-five years, and found in both external geniculate bodies an alternating simple atrophy of the cell laminae, i.e., on the left side an atrophy of all portions of the peripheral layer (the peripheral large cell lamina, the peripheral medium-sized cell layer and its intermediate continuation) with intact central layer, while on the right side the conditions were reversed—intact peripheral laminae, the central atrophied. This shows that the peripheral laminae receive the contralateral optic nerve fibres, the central laminae the homolateral.

These findings confirm those previously put forward by Minkowski, and give further proof of the fact that the optic fibres running back from both eyes have a distinct and separate termination in both primary optic centres, and do not intermingle as has been held by some writers.

The corpus pre-geniculatum on the homolateral side was practically intact, but showed marked changes on the contralateral side. This nucleus the author regards as a primary optic centre like the external geniculate body but differing from it in that it receives only crossed fibres.

The visual cortex showed no definite sign of atrophy on either side.

The author refers in a footnote to a valuable article on the same subject by Le Gros Clark which appeared in this Journal, May, 1932.

THOS. SNOWBALL.

BOOK NOTICES

Reports of the Committee upon the Physiology of Vision. Vol. XII. Colour Vision Requirements in the Royal Navy.

The Reports of Committees of the Medical Research Council which have already been published have established a very high standard. It can be said without hesitation that the report on colour vision in the Navy does not fall short of its predecessors. Throughout its pages the reviewer has been impressed by the evidences of meticulous care and thoroughness in the investigations of matters under consideration: their concise and decisive statements arouse a
suspicion that the Committee have become imbued with the methods of expression characteristic of the Navy.

The preface contains the following paragraph:—"The work was originally undertaken at the request of the Admiralty, and was done with the aid of facilities given in the Royal Navy. On the completion of the report it seemed to the Committee that the results had a wide public interest, transcending the conditions and requirements of the particular service, and that they ought to be made generally available. The Medical Research Council are therefore greatly indebted to the Lords Commissioners of the Admiralty for permitting publication."

We may add that members of the medical profession, generally, will be equally grateful.

The contents of this report are grouped under headings A to H; an Appendix includes a Report of Colour-vision Tests, and the detailed results of the examination of 19 individuals.

In Section B, "General Considerations and Recommendations"; Section C, "Specific Considerations and Recommendations"; and Section G, "Summary and Conclusions"; will be found the salient features of the report and those of greatest interest and assistance to members of the medical profession and others who may be in any way responsible for the detection of defective colour-vision.

That part of the Report which will attract the widest general interest concerns the incidence of defective colour-vision which this investigation has shown to be much higher than the 4 to 5 per cent. (in males) generally accepted hitherto, and which represents the percentages obtained by two earlier Committees in this country, among unselected males.

The Committee's statement is as follows:—"Defective colour-vision is much commoner than is generally supposed. An unselected male population contains at least 4 per cent. of crudely defective persons (dichromats). The anomalous trichromats are considerably more numerous. Six per cent. is a very conservative estimate of the incidence of anomalous trichromatism among some 30,000 naval ratings (a selected population), tested in the course of this investigation. On the lowest estimate, therefore, more than 10 per cent. of an unselected male population have imperfect colour-vision." (The italics are ours).

It is probable that the Committee's estimate of ten per cent. of colour-vision defectives (of all grades) among unselected males, based upon the results of their investigation, may be accepted as substantially correct. It is, however, only an estimate, and has yet to be established as the actual percentage. Further evidence on this question is desirable and could be made available by the examination of a large number of unselected males, by tests and methods of examination exactly similar to those employed by the Committee.
It is probably fair to assume that the noticeably higher proportion of colour-vision defectives recorded by the Committee is partially, perhaps mainly, explained by the greater accuracy and delicacy of the present day tests and methods of examination.

The sections descriptive of the technique of the three tests which the Committee recommend, the Ishihara Test, the Edridge-Green lantern Test and the Board of Trade lantern Test are very explicit: an examiner who studies them with care can scarcely fail to carry out the tests intelligently.

The Committee's emphatic statement that "no single test is infallible" should be taken to heart by all examiners.

Section G. containing the Summary of Conclusions is specific to the Royal Navy and therefore not of particular interest to the average reader, but it will be well to quote the first and second paragraphs. They run as follows:—

1. The existing system of testing colour-vision has failed to exclude seriously defective persons from the Navy.

2. The final examination of the colour-vision of candidates for entry should be undertaken, at the Training Establishments, by ophthalmic surgeons equipped with adequate apparatus. All other examinations should be regarded as provisional, and the candidates should be on probation until they have passed this final test. No lesser reforms will solve the problems presented by the Seaman Branch and ensure the safety of the Service.

The recommendations of a Committee with a personnel of distinguished scientists such as this, merits and will doubtless receive serious consideration by the Admiralty. To carry out the methods of examination which in the opinion of the Committee are essential, will prove a difficult task for the Medical Department of the Royal Navy in its present under-staffed condition. But that they will tackle it, as the Navy always tackles difficulties, is not open to doubt.

Miners' Nystagmus: its Symptoms, Aetiology, and Treatment.

The author introduces his subject by giving an account of the main features in the differential diagnosis of nystagmus and a brief description of diseases such as disseminated sclerosis, Friedreich's ataxia, lesions of the cerebellum and semi-circular canals, congenital nystagmus, total colour blindness and albinism.
An account is given of the conditions under which miners work, and the relatively high incidence of nystagmus in men working in poor illumination, such as the colliers, repairers and timbermen is commented on.
A chapter is devoted to the symptoms and physical signs accompanying this disorder, and the author classifies the cases into atonic, spastic and psychic. The aetiology is discussed in regard to the position of the miner at work; defective illumination; certain colliery factors such as the age of the pit, the carbon and hydrogen ratio and the percentage of volatile matter; hereditary pre-disposition; the toxic effects of alcohol and tobacco; focal sepsis; refractive errors; accidents; the absence of sunlight and ultra-violet rays; deficiency in haemoglobin and vitamin and occupational neurosis.

Recommendations are made for the treatment of miners' nystagmus and its allied disorders of headache, vertigo, insomnias, constipation, conjunctivitis and neurasthenia. Notes of 50 cases are reported, and there is a bibliography and an index.

The author feels that by raising the standards of physical fitness and improving the lighting system, miners' nystagmus will eventually be eliminated from the mining industry.

This book is full of interesting observations and reflections.

**Chronic Nasal Sinusitis and its Relation to General Medicine.**


This monograph contains an account of the pathogenesis of the systemic toxaemias and secondary infections of chronic nasal sinusitis. The need for diagnostic precision is emphasized, and the method recommended is that of the author's suction-exploration technique. There are chapters on sinusitis in children and familial infection; sinusitis as a factor in producing diseases of the respiratory, gastro-intestinal and genito-urinary tracts, and in the aetiology of cardiac, arthritic and skin infections. A chapter is devoted to orbito-ocular affections of rhinogenous origin. The clinical features of these affections are described, and particular attention is paid to cases of retrobulbar neuritis associated with infection in the sphenoidal and posterior ethmoidal sinuses. The author stresses the importance of prompt diagnostic methods to determine the site of intra-nasal infection in these cases. He uses a cannula for puncturing the wall of the suspected sinus and withdrawing its contents for pathological examination. He points out the necessity for recognizing morphological abnormalities of sinuses, and quotes two interesting cases where one sphenoidal sinus was large and extended across both sides of the mid-line, and the other was small, the cavity of which was entered after first puncturing the large sinus and then turning the cannula laterally and making a second puncture. Infection in the small sinus, which was in close relation to one optic nerve might have been missed if this anatomical defect had not been realised.
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Reports on the visual field changes in retro-bulbar neuritis and case notes illustrating certain important features are given. Some principles of treatment are dealt with and pernasal and external operations described.

This book is well produced and the illustrations excellent. The author is to be congratulated on making an important link between rhinology, general medicine and ophthalmology where chronic nasal sinusitis is concerned.


This handsome volume contains reprints of 65 papers which have been published from the Wilmer Institute in various journals; and the members of the staff of the Institute take the opportunity of its appearance coinciding with Dr. Wilmer's 70th birthday, to offer affectionate greetings to their Director. With such a wealth of material, it is not of course possible within the limits of a short notice to give a detailed list of the contents; but we may say that the volume is worthy of the great Institute from which it has sprung; and contains evidence of work in physics, physiology, clinical ophthalmology, immunology and ancillary subjects. Perhaps the most interesting paper of them all is that on Milton's blindness by Dr. Wilmer. He is able to disprove the albino question once and for all by the reproduction of a portrait of Milton as a boy, which is in Mr. Pierpont Morgan's collection. Dr. Wilmer inclines to chronic glaucoma as the cause of the blindness, but admits that myopia complicated by detachment has claims for consideration.

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THE CILIARY MUSCLE AND DESCemet's MEMBRANE

To the Editors of The British Journal of Ophthalmology.

Sirs,—May I suggest that a study of Comparative Anatomy disproves Mr. de Villiers' conclusions in his recent article on the Ciliary Muscle and Descemet's Membrane?

In a demonstration of the comparative anatomy of the angle of the anterior chamber in man and monkeys (Trans. Ophthal. Soc.