

# THE BRITISH JOURNAL

OF

# OPHTHALMOLOGY

JULY, 1942

## COMMUNICATIONS

### THE COLLECTED WORKS OF C. H. USHER

A contribution to Human Genetics, mainly  
ophthalmic, and to its bibliography

BY

W. C. SOUTER

ABERDEEN

TWO main reasons exist for attempting to put on record the papers and other works of the late C. H. Usher. The first comes from the head, and is prompted by the remark of Sir John Parsons a few years ago at a meeting of the Ophthalmological Society of the United Kingdom, when he referred to the fact that the President had published some very high-class work in out of the way journals, not coming into the view of the ordinary ophthalmic surgeon. Consequently it might prove helpful to future explorers if a list were made as nearly complete as can be expected at this time of difficulty. The second reason is from the heart, and may be acceptable as a small tribute from one who was privileged to be his first and only assistant at the Aberdeen Royal Infirmary from 1906 to 1913, becoming then his Chief Assistant till his—Usher's—somewhat unwilling, retirement in 1926, thereafter his successor.

Dr. Usher's contributions took on much of the character of our local granite but retained the attractive sparkle of its mica. They

have already proved useful foundation stones and will, in future, be more widely used when known better.

Having come to us from Edinburgh he slipped back there for the last few years of his long life, leaving behind him a reputation for devotion to duty and for hard work, together with a literary output that can scarcely be equalled for its wide scope and its deep scientific value, that anyone might well envy.

1893.—Statistical Report of the Ophthalmic Department for the Year 1891—St. Thomas's Hospital—actually published in 1893.

*St. Thomas's Hospital Reports*, Vol. XXI, pp. 513-526, 1891.

1893.—A Note on Secondary Transverse Films of Cornea.

*Roy. Lond. Ophthal. Hosp. Repts.*, Vol. XIII, Part IV, pp. 508-528, 1893; one half page and two whole page drawings of sections; 5 references.

1896.—Medullated Nerve Fibres of the Human Retina. Microscopical examination of three eyes.

*Ophthal. Rev.*, Vol. XV, pp. 1-8, 1896; one plate (reproduction of drawing) and one small drawing; 4 references.

1896.—Observations on the Retinal Bloodstream at the Time of Death.

*Ophthal. Rev.*, Vol. XV, pp. 339-351, 1896; no illustrations; 2 references.

This early article is based on examinations made on man, monkey, rabbit and cat, and, although assailed now and then, would appear to have stood the test of time.

See *Trans. Ophthal. Soc. U.K.*, Vol. XLVIII, p. 150, 1928.

1896, July.—Experimental Research on the Course of the Optic Fibres. With Dr. (afterwards Professor) George Dean, from the Aberdeen University Pathological Department under Professor D. J. Hamilton.

*Trans. Ophthal. Soc. U.K.*, Vol. XVI, pp. 248-276, 1896; 3 Plates, numerous sketches—a preliminary communication.

Deals mainly with the early work on rabbits before monkeys were operated on.

Later, in *Brain*, Vol. XXVI, No. 104, dealing with the experiments on *Macacus Rhesus*.

1904.—Notes of Cases of Pulsating Exophthalmos. With one plate.

*Ophthal. Rev.*, Vol. XXIII, pp. 315-330, 1904.

Of the three cases recorded one came to autopsy, and the Plate shows the drawing made by Professor R. W. Reid. Autopsy cases

were only something over 19 since Sattler's paper in 1880, but the main other interest in the paper is the suggestion to tie the external and internal carotids instead of the common carotid.

1906.—An Analysis of a Series of Consecutive Conjunctivitis Cases seen in Aberdeen. With charts, tables, 3 Plates, of which two are of micro-organisms. Along with Dr. Henry Fraser, afterwards of Kuala Lumpur.

*Roy. Lond. Ophthal. Hosp. Repts.*, Vol. XVI, Part IV, pp. 434-495, June, 1906. A few footnote references.

A carefully worked-out survey of the subject in Aberdeen, somewhat marred by the quite inexplicable mis-spelling 'Koch-Week's bacillus' throughout. Bacteriological work of a very high order, according to Angus Macnab.

1906, July.—A Note on the Choroid at the Macular Region.

*Trans. Ophthal. Soc. U.K.*, Vol. XXVI, pp. 107-110, 1906; two micro-photographs.

Microscopic sections of twelve eyes showed that the two papilla-diameter dark area at the macular area has these features, a deeper pigmentation of the retinal epithelium, an increased thickness of this layer, a marked increase in the pigmentation of the choroid, an increase in the thickness of the choroid. "It might be expected that when pigment is present at all in the choroid of an albinò, it will be situated at that part which is directly behind the macular region of the retina."

1906, July.—Notes of a Case of Unilateral White Eyelashes and Tufts of Hair. With pedigree in text.

*Trans. Ophthal. Soc. U.K.*, Vol. XXVI, pp. 23-26, 1906.

It is interesting that no mention is made of the historic white tuft of James McNeill Whistler.

1912.—Case of Congenital Nystagmus with Microscopical Examination of Eyeballs.

*Roy. Lond. Ophthal. Hosp. Repts.*, Vol. XVIII, pp. 440-447, 1912; one folding pedigree, one plate, three references.

1912, June.—A Pedigree of Colour-Blindness.

*Trans. Ophthal. Soc. U.K.*, Vol. XXXII, pp. 352-361, 1912. Some footnote references; inset a very large pedigree chart.

1911-1913.—The Magnum Opus. A Monograph on Albinism in Man.

Drapers' Company Research Memoirs—Biometric Series. With Karl Pearson, F.R.S., and E. Nettleship, F.R.C.S., F.R.S. 6 Vols.

1914.—The Refraction of the Eyes and Nystagmus in Two Albino Infants. A short note.

*Ophthalm. Rev.*, Vol. XXXIII, pp. 362-365, 1914.

It is suggested that the astigmatism be considered congenital, whilst there is some support for the view that the rapidity of the oscillations of nystagmus in albinos tends to increase, up to a certain time, with age. One of the earliest recorded such examinations made.

1914.—On the Inheritance of Retinitis Pigmentosa. Letterpress covering 40 pedigree charts, some very extensive, with some tables and Fields.

*Roy. Lond. Ophthalm. Hosp. Repts.*, Vol. XIX, Part II, pp. 130-236, 1914.  
About 116 footnote references.

In the 40 pedigrees were 69 cases of retinitis pigmentosa, and 35 of the cases were investigated as to the Wassermann reaction by Dr. A. W. Falconer, afterwards Professor and then Principal in the University of Cape Town, one of the earliest and largest such groups so investigated. In 21 of the 40 pedigrees there was but one case of the affection found. On page 160 occurs the caveat "Yet, it has so frequently occurred when working out these pedigrees that a description closely resembling that of retinitis pigmentosa has led to the supposition that this disease was present, until on examination some other condition was found, that the importance of accepting with reserve any case that has not been examined, it seems to me, cannot be too strongly emphasised." Along with this one should take note that Nettleship in his extensive paper "On Retinitis Pigmentosa and Allied Diseases," *Roy. Lond. Ophthalm. Hosp. Repts.*, Vol. XVII at p. 359, says "the well authenticated occurrence, at all ages, of cases where the classical symptom of night-blindness was either absent or unnoticed, or perhaps sometimes concealed, even when the retinal changes were strongly marked."

It will not be disputed, I think, that this article is the most complete in any language on the subject of the inheritance of retinitis pigmentosa.

1915.—Pedigrees of Colour-Blindness, by the late E. Nettleship, arranged by C. H. Usher.

*Roy. Lond. Ophthalm. Hosp. Repts.*, Vol. XX, pp. 93-107, 1915; 2 folding and one smaller pedigrees, 2 references.

1916.—A Corneal Spatula: an Instrument for use in removal of Deep-Lying Foreign Bodies in the Cornea.

*Ophthalm. Rev.*, Vol. XXXV, pp. 16-17, 1916.

For foreign bodies, deep in cornea but not projecting to anterior chamber, carefully worked out anatomically; light for dark objects and vice versa.

1916, March.—Choroideremia and Two Other Varieties of Night-Blindness in the Same Pedigree. With H. E. Smith.

*Roy. Lond. Ophthalm. Hosp. Repts.*, Vol. XX, pt. 2, pp. 157-174, March, 1916. Coloured drawings of the choroideremia case were reproduced by Dr. Julia Bell in the *Treasury of Human Inheritance*, 2, Nettleship Memorial Volume, pt. 1, 1922.

1920.—Enlarged Corneae in Goldfish (*Carassius auratus*).

*Trans. Ophthalm. Soc. U.K.*, Vol. XL, pp. 125-132, 1920. One sketch in text, and 15 rather unusual references.

1920.—Histological Examination of an Adult Human Albino's Eyeball, with a Note on Mesoblastic Pigmentation in Foetal Eyes. Two coloured plates with eleven paintings and an excellent bibliography, 20 references.

*Biometrika*, Vol. XIII, No. 1, pp. 46-56, October, 1920.

E. E. H.—*Brit. Jl. Ophthalm.*, Vol. V, p. 283, 1921—says, "Careful serial sections were cut horizontally, no sections being lost. In none of them could a fovea be made out, but the retina, as in normal eyes, had several layers of ganglion cells at the macula. The macula had a yellow colour when the eye was opened. The pigmentation of the retinal epithelium resembled that in a normal eye, but was less in quantity. Mesoblastic pigmentation was entirely absent in the iris, ciliary body, and most of the choroid, only a few cells in the macular region containing any pigment. Usher points out that the defective vision and nystagmus found in albinos is probably mainly due to the absence of a fovea, and not, as has been suggested, to defective retinal pigmentation."

It is to be hoped that this valuable and original contribution may not elude the ophthalmic bibliographers of the future now that E. E. H. has recorded it in the *Brit. Jl. Ophthalm.*

1921, July.—A Pedigree of Microphthalmia with Myopia and Corectopia. One pedigree chart in text, and 39 plus 11 references in the bibliography.

*Brit. Jl. Ophthalm.*, Vol. V, pp. 289-299, 1921.

A very helpful article for any future worker on the topic. Appearances so striking that W. C. S. suspected a child, born about 1935, and having the special features in the eyes, must belong to this same pedigree. A few minutes proved that this case belonged to a later period of this pedigree.

1923.—Cases of Metastatic Carcinoma of the Choroid and Iris. 7 text photos of micro sections, an analysis of 107 (plus the new 3) cases from the literature, tabulated; and a group of 32 references.

*Brit. Jl. Ophthalm.*, Vol. VII, pp. 10-54, January, 1923.

This scholarly article deals with three cases and covers clinical and pathological examinations besides, in one case, autopsy findings by Professor Shennan. The critical analysis is so comprehensive that it may be asserted this article will be a suitable jumping-off point for any future explorer in this field. It is more than appropriate that it should be placed after the fine tribute by Mr. J. B. Lawford to Edward Nettleship, in the British Masters of Ophthalmology Series. In this tribute one can see where many of the Usher traits were likely to have had their origin.

1924.—A Pedigree of Congenital Dislocation of Lenses.

*Biometrika*, Vol. XVI, pp. 273-282, 1924. 3 pages of pedigrees, and notes of some published cases for comparison with the present pedigree.

1924.—A Note on the Dog's Tapetum (lucidum) in Early Life. 2 references, no illustr.

*Brit. Jl. Ophthalm.*, Vol. VIII, pp. 357-361, 1924.

An original observation that the tapetum lucidum of the dog is not recognizable ophthalmoscopically for several weeks after birth, and that the early ophthalmoscopic appearances of the tapetum differ markedly from those seen in the adult animal. Puppies from ten different litters were observed. Some account of the conditions in the kitten's and cat's eyes is added.

1925, October.—A Pedigree of Epicanthus and Ptosis. 4 pages of Plates, photographic, exquisite; and 1 page with numerous pedigrees. Bibliography—general, 12 refs., and hereditary cases 12 refs.

*Annals of Eugenics*, Vol. I, Parts I and II, pp. 128-138, October, 1925. 2 pages are devoted to accounts of some previously published pedigrees.

An excellently illustrated and documented article, in recherche style.

Abstract by Lawford in *Brit. Jl. Ophthalm.*, Vol. X, pp. 45-48, 1926.

1926, April.—Epithelial Cyst of the Sclera. One Plate of four photographs, two text micro-photographs.

*Brit. Jl. Ophthalm.*, Vol. X, pp. 177-180, 1926.

Sections of cyst wall and a careful chemical analysis of the fluid from the cyst help to fix this interesting case.

1926, April.—Frequency of Metastatic Carcinoma of the Choroid.

*Brit. Jl. Ophthalm.*, Vol. X, pp. 180-181, 1926. No illustr.

Short notes of a fourth case to be added to the article in *Brit. Jl. Ophthalm.*, 1923.

1926.—Melanoma of Choroid.

*Trans. Ophthalm. Soc. U.K.*, Vol. XLVI, pp. 131-132, 1926.

1927, September.—Two Pedigrees of Hereditary Optic Atrophy. One text pedigree and one long insert pedigree, with 16 references.

*Brit. Jl. Ophthalm.*, Vol. XI, pp. 417-437, 1927.

Ped. A. is one of Leber's disease containing three affected males in one sibship, an affected first cousin, and certainly two—one a female—but probably four affected cases in previous generations.

Ped. B. contains sixteen individuals with double optic atrophy, of these fourteen are males and two females.

Pedigrees comparable in extent and on the same topic include that by Ritchie Russell and a Japanese one, Kawakami's.

1927, October.—An Analysis of the Consumption of Tobacco and Alcohol in Cases of Tobacco Amblyopia. Part I, General Discussion by C. H. Usher. Part II, Detailed Statistical Discussion by Ethel M. Elderton.

*Annals of Eugenics*, Vol. II, parts III and IV, October 1927. Part I from p. 245 to p. 265, including 111 References, and an Appendix—Report on the Results of Analyses of Samples of Tobaccos by J. F. Tocher, D.Sc., and a Report on the Results of Analyses of Samples of Tobaccos by John E. Ritchie, M.A., B.Sc., F.I.C., and two assistants.

A very important contribution to a subject of everyday interest, giving the results in 1,100 cases of tobacco amblyopia and in 500 pipe-smokers with sight unaffected, with several tables and most valuable analyses of the various tobaccos. 27 of the cases were women.

1928.—Presidential Address to the Ophthalmological Society of the United Kingdom. "Some Relationships between Animals' Eyes and Human Ophthalmology."

*Trans. Ophthalm. Soc. U.K.*, Vol. XLVIII, pp. liiii-lxiii, 1928.

Some very interesting remarks on his wide experience of albinotic animal eyes, on his personal studies on the eyes and coats of winter-white birds and hares and stoats; together with some advice in regard to pedigree work in man and in animals. A unique exposé of the subject by the greatest authority on the topic.

## 1929.—Albinism in Dogs.

*Biometrika*, Vol. XXI, Parts 1-4, pp. 144-163, 1929. With Karl Pearson.  
See Mr. Lawford's note in *Brit. Jl. Ophthalm.*, Vol. XIV, pp. 642-643, 1930:—

“There are 19 pages of letterpress, 8 full-page plates, of which two”  
“are in colours, and two long pedigrees. It teems with facts and”  
“observations arranged with the meticulous care which character-”  
“izes the published work of the two authors.”

## 1930.—Two Pedigrees of Retinitis Pigmentosa; I by C. H. Usher, and II by C. H. Usher and T. Shennan.

One large Plate covering the two Pedigrees. A few footnote references.  
*Annals of Eugenics*, Vol. IV, Parts I and II, pp. 215-231, April, 1930.

Pedigree I has 243 members in 6 generations with night-blindness in 37 individuals distributed in 14 sibships. Pedigree II is an extension of one by Hine, 1928.

## 1932, May.—Hereditary Entropion and Hereditary Changes in the Skin of the Eyelids.

*Biometrika*, Vol. XXIV, Parts I and II, pp. 1-20, May, 1932; together with four full-page Plates of photographs of cases, 3, 2, 4, 4 faces on the respective plates; 52 references, 14 smaller pedigree charts in text and one inset long pedigree.

1932, November. Coloured Areas in the Sclerotic. One Plate, a photographic reproduction of four water-colour paintings of eyes. It is regrettable that the originals were not copied in colour.

*Brit. Jl. Ophthalm.*, Vol. XVI, pp. 671-680, 1932, 27 references.

Shows the value of careful records and of paintings of such cases for future comparison. Six of the nine cases were re-examined, no great change had taken place, but definite changes had occurred in two cases.

## 1933.—Heredity and Eye Diseases—Opening Paper.

*Trans. Ophthalm. Soc. U.K.*, Vol. LIII, pp. 16-29, 1933. Some footnote references, four pedigree figures in text, and one large inset pedigree chart.

Some very interesting observations on his own experiences as well as from some of the literature.

## 1935.—Pedigrees of Hereditary Epicanthus.

*Biometrika*, Vol. XXVII, pp. 5-25, 1935, 8 references, 34 pedigree charts, 32 in text, and two full-page ones.



1935.—On a Few Hereditary Eye Affections—Bowman Lecture of the Ophthalmological Society of the United Kingdom.

*Trans. Ophthal. Soc. U.K.*, Vol. LV, pp. 164-245, 1935. Numerous pedigree charts in the text and some photographs of cases of ptosis and epicanthus, with extensive bibliography, and with several Appendices, as in Mr. Nettleship's Bowman Lecture of 1909.

The subject-matter includes choroideremia, atrophía gyrata choroideae et retinae, an unusual pedigree of retinitis pigmentosa, angiomatosis retinae and epicanthus. A very 'meaty' article on the topics dealt with.

1936.—Heredity.

*The Eye and its Diseases*, edited by Conrad Berens—Philadelphia and London, pp. 321-2, 1936; 3 sample pedigree charts, 2 references.

Some abstracts and reviews, some at least initialled, in the *Ophthal. Rev.*; some work quoted in the Nettleship Bowman Lecture, *Trans. Ophthal. Soc., U.K.*, 1909; and some contributions, partly already published, 48, partly new, 9, pedigrees, in the Treasury of Human Inheritance, Nettleship Volume, Editor, Karl Pearson, *i.e.* 57 pedigrees by him in the total of 1249 pedigrees, many of which are flimsy sketches compared with his full-dress pedigrees, must be added to the List given, a list which is only as complete as one can make it at the present juncture.

---

## REPORT ON A CASE OF LYMPHOMA OF THE ORBIT

BY

MONTAGUE L. HINE

LONDON

THIS case is recorded because of its rarity, and the very satisfactory result of the treatment advised at a late stage.

The patient, a spinster aged 58 years, was first seen by Mr. Tulloh of Bournemouth in January, 1938. She then had a history of increasing swelling of the left upper lid for two years. In April, 1938, the orbit was X-rayed, with negative result, and in November, 1938, Mr. Tulloh made an exploratory incision into the orbit, finding that the growth extended far back. A portion he removed for examination was reported to be "lipoma," and he