

Colonel John Cunningham

THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

Report on the papers of
COLONEL JOHN CUNNINGHAM CIE, FRSE
(1880-1968)

deposited in the Library of the
University of Edinburgh

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THE ROYAL SOCIETY THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS
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CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

Report on the papers of
Colonel John Cunningham CIE, FRSE
(1880 - 1968)

Listed by: Jeannine Alton
Harriot Weiskittel

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Description of the collection

The collection was received from Miss Mary and Dr. Daniel Cunningham, children of Colonel Cunningham.

Colonel Cunningham was the eldest son of Professor Daniel John Cunningham (see CSAC handlist 42/6/76), and brother of Admiral of the Fleet Viscount Cunningham of Hyndhope and General Sir Alan Cunningham.

The collection consists almost entirely of professional and scientific material and photographs; one or two personal photographs of Cunningham, his family and their quarters at stations in India are noted in Section B of the handlist. The photographs of the settlements, jails, village conditions, etc. are of interest.

Sections C - F relate to medical research of particular interest to Cunningham during his service in India: see the introductory notes to each section. Some account of his work on Rehabilitation at the Astley Ainslie Institution, Edinburgh, is given in Item A.1; some material relating to this work remains in family hands.

Descriptions in inverted commas are those which appear on the manuscripts; all work is manuscript unless otherwise indicated.

The help of Dr. Daniel Cunningham and Dr. Michael Dunnill is gratefully acknowledged.

Summary of the career of Colonel Cunningham

b.1881	
1890-95	Educ. Loretto School
1895-99	Epsom College
1899-1903	Trinity College, Dublin
1904	Edinburgh University
1905	entered Indian Medical Service
1906	M.D., Trinity College, Dublin
1908	Assistant Director, Bacteriological Laboratory, Bombay Secretary, Pathological Section, Bombay Medical Congress
1912	Assistant Director, Pasteur Central Research Institute, Kasauli, Punjab
1915-16	War service on Indian North-west frontier (mentioned in dispatches)
1916	Acting Director, Pasteur Institute, Kasauli married Bertha Emily Chapman
1919-26	Director, King Institute, Madras
Dec.1925-29	Director, Pasteur Institute, Kasauli
1927	General Organising Secretary, Seventh Congress of the Far Eastern Association of Tropical Medicine
1928	C.I.E.
1929-48	First Medical Superintendent, Astley Ainslie Institution, Edinburgh
1930	Fellow of the Royal Society of Edinburgh
1951-59	Chairman, Board of Management, Astley Ainslie, Edenhall and associated hospitals
1954	Hon. Fellow, World Federation of Occupational Therapists

Contents of the handlist

		<u>Items</u>	<u>Pages</u>
A.	Obituaries & Personal Notebooks & Bibliographies	A.1 A.2-A.18	3 3
B.	Photographs taken in India	B.1-B.11	4
C.	Work on Dysentery	C.1-C.3	5
D.	Work on Relapsing Fever	D.1-D.65	5
E.	Work on Rabies	E.1-E.26	10
F.	Work on Vaccine Lymph	F.1-F.7	12
G.	Seventh Congress, Far Eastern Assn. of Tropical Medicine	G.1-G.6	12
H.	Reports & Publications	H.1-H.25	13

A. Miscellaneous obituaries and personal

- A.1 Application by JC for an appointment in 1926, which includes a full account of his career to that date. Outline of JC's work on rehabilitation on appointment to Astley Ainslie Institution, Edinburgh. Obituary, Year Book Roy. Soc. Edin. 1967 - 68. Lists of scientific publications and papers.

Notebooks and bibliographies A.2-A.18

- A.2 Notes, mainly on phthisis cases, inscribed inside front cover by Cunningham, 'work carried out by JC in 1905-6 while resident in R.I.E. [Royal Infirmary, Edinburgh] as H.P. to Dr. G.A. Gibson after a visit to Sir Almroth Wright's Laboratory in St. Mary's Hospital, London, to learn bacteriological techniques. The results were written up and formed the subject of my thesis for the M.D. at T.C.D. in 1906'.
- A.3 Sheaf of notes 'Dysentery Inquiry Notes': account of scheme, methods and records, tours of inspection of jails, etc. See also Section C.
- A.4 Loose notes on Chemotherapy.
- A.5, A.6 2 black loose-leaf notebooks. Notes on the literature, mainly on Spirochaetes. A.5 contains index to both books.
- A.7 Black loose-leaf notebook. Notes on the literature, and also for paper or discussion, on malaria and other tropical diseases.
- A.8 Small loose-leaf notebook, labelled on spine and on front page 'Notes on Diarrhoea'.
- A.9-A.17 Series of loose-leaf notebooks with alphabetical guides on spine and in body of the book. They contain notes on the literature, and notes for lectures and addresses. Book 'A' is missing and there are 2 books labelled 'R'.
- A.9 'B-C'
- A.10 'D'
- A.11 'E-G', with note on first page 'Notes on Prof. Ashworth's course on Entomology, Helminthology, Protozoology, Edinburgh 1920'.
- A.12 'H-O' (continues A.11).
- A.13 'P-Q'
- A.14 'R', A.15 'R'; both contain extensive notes on the literature of rabies.
- A.16 'S'; includes notes on Spirochaetes and Relapsing Fever.

A.17 'T-Z'; includes tables of equipment, chemicals, sera, special apparatus, etc. (perhaps for Kasauli Pasteur Research Institute).

A.18 Folder of misc. bibliographical references.

B. Photographs B.1-B.11

Colonel Cunningham took a large number of photographs during his long service in India 1905-1928.

The subjects are both professional and personal. They include the institutes and laboratories in which JC worked, their personnel, equipment and facilities and the work carried out in them; there are also photographs of JC's own quarters, his family and friends, the scenery and surrounding villages, and the native population. B.2 deals with JC's service at Peshawar during the First World War.

Not all the original photographs survive. JC appears to have gone through them during his retirement (c.1961), often adding dates and descriptions, and sometimes noting losses of negatives.

There are three albums (B.1-B.3) mainly of scientific work, including war service. The remainder are loose mounted photographs; all bear on verso numbers, dates and descriptions added by JC in 1961. It is clear from these notes that the negatives had originally been kept in boxes, and that many are missing. Numbers B.4-B.11 in the list below have a note of the original box designations given by JC. Only a brief note of the contents is given in view of JC's own descriptions on verso. The photographs in B.4-B.11 are all 'double extension', intended to be viewed through a device giving a stereoscopic effect.

- B.1 Album of photographs (c) 1915-16, illustrating the large-scale preparation of vaccine lymph for the forces in India, Mesopotamia, E. Africa, Egypt and the East. As material was in short supply, beer and whiskey bottles sometimes had to be used to hold the vaccine, as can be seen in some of the photographs.
- B.2 Album of photographs 1915, of war service in Peshawar. Military, medical and some personal photographs, some interleaved with descriptions and identifications added by JC in 1961.
- B.3 Album of photographs 1919-1924 of the King Institute, Madras, its laboratories, personnel, equipment; with descriptions and identifications added by JC in 1961.
- B.4 'Box XIX', nos. 1, 2, 4-17
Kasauli 1916-17; scenery, surroundings, own quarters.
- B.5 'Box XX', nos. 1, 3-6, 8-11, 13, 14
Kasauli 1916-18; scenery, own quarters, personnel (nos. 2 and 11 are of JC)
- B.6 'XXI'. Two prints of one photograph of Kasauli 1917 (print dated 1964).

- B.7 'XXII', nos. 1-11, 13-21
Kasauli 1912-16 and visit to friends and village in Punjab 1917
(no.14 is of JC).
- B.8 'XXIII', nos. 1, 3-10, 11-13
Kasauli 1918; of winter snows.
- B.9 'Box XXIV', nos. 1-16
Kasauli 1912-16; Central Research Institute, settlement and surroundings.
- B.10 'XXVI', nos. 1, 2, 2a, 26, 3-11
Barisal, E. Bengal 1913-14; of jail, prisoners, Black Watch parade.
Many of the photographs relate to the enquiry into dysentery conducted
by JC 1912-14, see Section C.
- B.11 'B.8', nos. 1-8
Madras 1921-25; Nawabs Gardens, and family photographs.

C. Work on Dysentery C.1-C.3

Cunningham and Captain H. King undertook an enquiry into the disease in Bengal in 1912, the results being published as 'Dysentery in the Jails of Eastern Bengal', Indian J. Med. Res., IV, 3, 1917, V. 1 and 2, 1917. JC published other papers on the disease both before and after the enquiry (see list of publications in Section H).

Section C contains:

- C.1 Preliminary paper 'Dysentery, Problems and Proposals', prepared by JC and Major W. Harvey for the All-India Sanitary Conference, Madras, Nov. 1912; the paper was read by JC and includes his ms. introductory remarks on the last page.
- C.2 Central Res. Institute folder entitled 'Dysentery Enquiry 1912-14. List of cases and types of organism'.
- C.3 Box of casenotes of prisoners suffering from dysentery; analyses, post-mortems, etc.

Much of this material refers to Barisal Jail, see photographs in B.10.

D. Work on Relapsing Fever D.1-D.65

JC's 'prolonged and extensive researches on the bacteriology and immunology of Relapsing Fever, and his outstanding successes in that field' are described by Professor A.D. Gardner in his obituary notice of JC (A.1). The various research documents and notebooks cover the period 1922-29, JC's first publications on the subject dating from 1925.

The work is presented chronologically as far as possible.

- D.1 File of cards 1922-24, charting case-histories of squirrels inoculated from other experimental animals (squirrels and monkeys).
- D.2 Ditto, 1922-24, case-histories of monkeys inoculated from other experimental animals.

- D.3 Ditto, of mice (1922), rats and other animals (1924), immunity charts (1924). Some of these relate to experiments on rat bite fever and relapsing fever in patients' blood.
- D.4-D.58 Sequence of laboratory notebooks numbered 1 - 35b by JC. The books are kept in their original order, though this is not always chronological, and not all the work is directly related to Relapsing Fever; a brief note of the contents is given below. Not all the work is in JC's hand.
- D.4 'No. I', 1922-23 dated notes and experiments.
- D.5 'Relapsing Fever 1-a', 1924. Notes on microphotography magnifications.
- D.6 (not included in JC's numbered sequence) 1923. Notebook with plans for series of experiments.
- D.7 'No. II', 'Relapsing Fever Immunity Experiments. 2nd series from 23/4/24'. Includes some correspondence, 1925, from J.H. Theodore, JC's collaborator and co-author, and some notes on human sera.
- D.8 'No. III', 1924, dated notes and experiments (including some 1928).
- D.9 'No. IV', 'P. Mortems 1922-24'.
- D.10 'No. V', 'Morphology', 1923.
- D.11 'No. VI', 'Experiments Lice'; 10 p. ms. draft titled on p.7: 'Result of experiments conducted to find out the feasibility of making use of sunlight for the destruction of lice in infested clothing'.
- D.12 'No. VII'. Notes, graphs, counts, etc. of spirachetes in laboratory monkeys, 1923, and note on 'Spirocheta motility' dated 1929.
- D.13 'IX'. Dated blood-counts of monkeys Oct.-Nov. 1922.
- D.14 'X', work described inside front cover as 'Blood and leucocyte count of monkeys inoculated with the spirocheta of relapsing fever', Nov.-Dec. 1922.
- D.15 'XI'. Similar observations. June 1923.
- D.16 'XII'. as above June-July 1923.
- D.17 'XIII'. as above June-July 1923.
- D.18 'XIV', work described inside front cover as 'Haemocytometric count of R.B.C. & W.B.C. of squirrels infected with Spirochaetes of relapsing fever', May-June 1923.

- D.19 'XV'. Book titled on front cover 'Animal Expt. Book': on rats and monkeys to test lice as carriers of relapsing fever, 1923; Notes and draft for paper 'Relapsing Fever in S. India', (based on severe epidemic 1921-22). Back cover entitled 'Lice Book' and inside 'Experiments with Lice', also related to relapsing fever epidemic, 1923.
- D.20 'XVI'. Expts. on squirrels 1925-26
- D.21 'XVII'. as above 1926-27
- D.22 'XVIII'. as above 1927-28
- D.23 'XIX'. as above 1928
- D.24 'XX'. Notebook of work described inside front cover 'To ascertain the Drug Resistance to Novarsensobillon (May & Baker, London) by Spirochaetes strains A. B. C. D. E. G. Plan of experiments to be carried out, and detailed laboratory observations 1927.
- D.25 'XXI', labelled on front cover 'Relapsing Fever enquiry. Genealogical tree'.
- D.26 'XXII'. Laboratory experiment notebook 1926-27.
- D.27-D.29 3 small black notebooks originally inserted in D.26:
- D.27 'Test of E. Spirochaete against its own serum' 1926.
- D.28 'To test the purity of D. Strain ... E strain ... A and P. strains' 1926.
- D.29 Similar tests 1926.
- D.30 'XXIII'. Misc. tests of labelled spirochaete strains 1927.
- D.31 'No.XXIV'. Misc. tests as above 1927.
- D.32 'No.XXV'. Misc. tests as above, 'various squirrel sera' 1927-28.
- D.33 'XXVI', labelled on front cover 'Serum Register'; at front: tables of 'Madras Monkeys' Sera' 1925-28; later in book: tables of spirochaetes strains 1926-28; at rear of book: 'Human Sera' 1926-28.
- D.34 'XXVII'. Misc. tests of labelled strains 1928-29.
- D.35 'XXVIII'. Notebook labelled on front cover 'Relapsing Fever inquiry. Salvarsan Second Series'; includes, pasted inside front cover, complete list of animals treated 1928.
- D.36 'XXIX'. Misc. tests in 'Salvarsan second series' 1928-29.

- D.37 'XXX'. 'Figures' (some loose sheets inserted) first page dated 1926, no dates given for experimental data.

Note: In 1929, JC became Medical Superintendent of the Astley Ainslie Institution, Edinburgh, and continued his interest in and publications on tropical medicine from his own material, and through correspondence, specimens and information from colleagues. The original files are in consequence bulkier and more heterogeneous and have been sub-divided to more manageable size in the list below.

- D.38 'XXXI, inscribed on cover 'Relapsing Fever, Immunity. Series III. 1925-27'.
Misc. contents, including notes on the literature and ms. drafts 'Original proposals for future work on relapsing fever 1925-26, 1926-27', and 'Proposals showing lines of work to be undertaken for the relapsing fever inquiry during the year 1928-29' (see also D.39-D.42 below).

D.39-D.42 Folders originally enclosed with D.38:

- D.39 'Madras strains and sera' 1925-26, with correspondence with J.H. Theodore
D.40 'General' 1926-28, with letter to J.H. Theodore
D.41 'Immunity. 2nd relapses'
D.42 'Punjab Strains' (graphs of labelled strains, with laboratory observations and calculations)

- D.43 'XXXII'. Ms. and typescript draft: 'Further Observations on Indian Relapsing Fever. Part II. The Serology of Relapsing Fever in Human Beings', by JC and A.G.L. Fraser (see also D.44-D.51 below).

D.44-D.50 Folders originally enclosed with D.43, giving data of incidence and treatment of Relapsing Fever epidemics in various areas of India, and related correspondence:

- D.44 'European Strains Correspondence' 1930-32
D.45 'Punjab'; contains material on 'Hazro Strain', correspondence with Public Health officials in India 1926-27, reports on epidemics in Multan area in Dera Ghazi Khan
D.46 'Relapsing Fever. Cases from the Kurram Valley'; correspondence and reports of cases 1926-29
D.47 'Quetta'; correspondence and case-notes 1927-28
D.48 'Drosh', as above, 1928
D.49 Cases, notes and correspondence on tick-fever 1915-17 (papers originally the possession of Col. J.A. Sinton, V.C.)
D.50 Misc. records and notes on fevers

- D.51 'XXXIIIa Immunity Experiments. Series IV.'
Notes on the literature; laboratory observations and data on experimental animals 1928-29.
- D.52 (originally included with D.51)
Ms. and typescript drafts: further observations on Indian relapsing fever. Part III, and Part IV by JC and A.G.L. Fraser 1936, and letter from A.G.L. Fraser 1929.
- D.53 'XXXIV (a) Immunity Experiments. Series IV.'
Mss. and experimental data 1926-28.
- D.54 'XXXIV (b) Relapsing Fever Immunity Experiments. Series IV.'
- D.55 '34c'. Small black notebook of experimental data, calculations and graphs, n.d.
- D.56 '34d'. ditto 1928
- D.57 '35a'. ditto 1929
- D.58 Notebook labelled on cover 'No. 35b Passage Book ending March 1929'.
- D.59 Ms. and typescript drafts, and charts for 'Further observations on Indian Relapsing Fever Part I, by J. Cunningham, T.H. Theodore and A.G.L. Fraser'.
- D.60 'Relapsing Fever. General Index.'
- D.61 'Observations of Relapsing Fever in India', lecture with note by JC, 'delivered to Edinburgh Branch of Royal Society of Tropical Medicine and Hygiene. Feb. 1936'. 17 pp.
- D.62 Misc. file of correspondence 1929-46 on relapsing fever; includes 'notes read at the Medical Congress Bombay Jan. 1919' (on dysentery).
- D.63-D.65 Material assembled for an exhibition of work on Relapsing Fever for 'His Excellency The Viceroy's visit on 4.10.1928'. 3 folders:
- D.63 Outline of exhibition, cards of exhibits (not complete) and photographs of laboratory animals
- D.64 Photographs of villages and patients with relapsing fever
- D.65 Other photographs and diagrams of diseases

E. Work on Rabies E.1-E.26

While the treatment of rabies had always been an important part of the work of the Pasteur Institutes in India, JC, on his appointment as Director at Kasauli, initiated a major research programme concerned chiefly with the comparative efficacy of etherised and carbolised vaccines, and of living and dead virus (see especially E.1 and E.15). The high incidence of the disease in India (8,000 cases per annum being treated at the Kasauli Institute alone), and the special geographical and social conditions prevailing, also involved administrative decisions about centralised specialist research institutes as opposed to local treatment centres.

The first results of JC's research programme were presented at the International Rabies Conference at the Pasteur Institute in Paris, April 1927 (see E.16). They were published, in collaboration, as An investigation into the value of an etherised vaccine in the prophylactic treatment of rabies, Parts I-VIII, 1926-1933, and A new technique for handling infected monkeys, 1929.

The papers are presented as follows:

- E.1-E.11 Laboratory experiments, case-notes and photographs.
- E.12-E.26 Correspondence and reports, including previous work carried out at Kasauli under earlier Directors and officers (especially Major W.D.H. Stevenson and Colonel H.H. King).
- E.1 Ms. notes by JC, 'Schema Antirabic Experiments', probably Jan. 1926.
- E.2-E.9 are experimental results, case-notes and correspondence based on the above.
- E.2 'Paris Virus' 1926-27.
- E.3 'Ether Experiments I. Resistance to Ether' 1926-27.
- E.4 'Ether Experiments II. Immunity tests in animals' 1926-28.
- E.5 'Ether Experiments III. Human Cases treated Ether virus' 1926-27.
- E.6 'Carbolised vaccine. Patients after-effects, etc' 1925-27.
- E.7 'Corneal Scarification' 1926.
- E.8 'Single and multiple types virus', 1926-27.
- E.9 Etherised brains 1929.
- E.10 Photographs of patients suffering from rabid bites, with details of treatment and results 1926-27.
- E.11 Photographs of equipment devised for handling expt. animals at Kasauli. (4 of these were used as plates to illustrate J.C's article A new technique for handling infected monkeys, Ind. J. Med. Res. 1929.)

- E.12-E.14 Correspondence and reports relating to work on rabies at Kasauli and other Pasteur Institutes 1924-25. This concerns dosage, effects of storage and temperature on vaccines, and refers to work carried out by JC's predecessors, Major W.D.H. Stevenson and Colonel H.H. King. 3 folders.
- E.15 Correspondence and reports by and to JC, Jan. 1926-Feb. 1927; includes letter and report from Colonel A.G. McKendrick, Dec. 1925, which suggested the research to compare carbolised and etherised vaccine preparations.
- E.16 Correspondence and reports by and to JC, March-July 1927, dealing especially with International Rabies Conference, Pasteur Institute, Paris, April 1927, with official report and resolutions, notes by the Indian Government representative Colonel J. Taylor, and the League of Nations representative Colonel A.G. McKendrick, and their Ms. correspondence and accounts of the proceedings sent to JC. (See especially Col. McKendrick's letter of 11 May 1927 in which passing reference is also made (p.4.) to JC's father, Professor D.J. Cunningham FRS.)
- E.17 Further notes and reports on International Rabies Conference and on continuing Rabies Research programme in India. 1927
- E.18 Correspondence and reports Aug. 1927-July 1928.
- E.19 Correspondence and reports Aug.-Dec. 1928, including Rabies Conference, Calcutta, Dec. 1928.
- E.20 Correspondence and reports Jan.-July 1929.
- E.21 Correspondence and reports Aug. 1929-April 1931.
- E.22, E.23 Mss. drafts, notes, tables and correspondence relating to work on rabies, and especially to publication of Part VIII of JC's Investigation: The comparative immunizing value of Carbolized, Ether-Carbolized and Etherized Vaccines. 2 folders.
- E.24 Comments by A. Hempt, Pasteur Institute of Novisad, Yugoslavia, on Kasauli experiments, and correspondence arising. 1934
- E.25, E.26 Article by JC on rabies, written for British Surgical Practice, VII. 1947-50
- E.25 Correspondence with publishers, draft of article, photographs
- E.26 Misc. correspondence with colleagues on recent rabies research.

F. Work on Vaccine Lymph F.1 - F.7

This work was carried out at the King Institute in Madras, which was "the principal research laboratory in the public health and bacteriological service in the Madras Presidency as well as serving as the Vaccine lymph depot for the area" (A.G. Gardner: obituary, see A.1).

(See also photographs in B.3.)

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| F.1 | Folder, cover inscribed 'Vaccine Lymph': 'Immunization by sub intracutaneous injection of lymph'.
Ms. Plans of courses of experiments, descriptions and photographs of experimental animals.
Abstract for paper 'Studies in Vaccinial Immunity in Rabbits', and Ms. draft of paper. | 1924 |
| F.2 | Folder, inscribed inside 'Experiments on the Correlation between "PH" and potency of lymph 1924'. Details of experiments and photographs. | |
| F.3 | Ms. and photographs, 'Generalised vaccinia on calf and its succeeding generations'. | 1922 |
| F.4 | Ms. and photographs of vaccines on a cock. | 1923 |
| F.5 | 'Practice of Vaccination'; draft and photographs for official circular. | 1924 |
| F.6 | Misc. photographs of vaccinated rabbit, buffalo, and calf. | |
| F.7 | Misc. photographs of vaccinated Indian and European children, showing use of glycerine and lanoline vaccines (1921-22), and of rotary lancet (1924) (includes photographs of immune reactions of JC's own children 1920). | |

G. Seventh Congress of The Far Eastern Association of Tropical Medicine G.1-G.6

The Congress was held in Calcutta, 5-11 Dec. 1927; JC was General Organising Secretary.

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| G.1-G.4 | JC's Report on the Congress, Parts I-IV. Only Part II, dealing with the proceedings of the congress itself, was published by the Government of India Press, Calcutta, 1929 (see G.5). Parts I, III and IV, dealing with the organisation of the congress, were not published. |
| Part I | Report on the General Organisation and Reports of Honorary secretaries of Local Committees |
| Part II | Report on The Proceedings of the Seventh Congress |
| Part III | Specimens of Congress Literature, Circulars, Cards and Badges, etc. |
| Part IV | Important Administrative papers, Circular letters, Orders, and procedure regarding Ceremonies, etc. |

G.5 Published Report of the Congress, Calcutta, 1929

G.6 JC's Press-cuttings book of the Congress.

H. Lectures, Reports and Publications H.1 - H.25

H.1-H.6 Annual Reports of the King Institute, 1919, 1920-21, 1921-22, 1922-23, 1923-24 and press cuttings.

H.7-H.9 Annual Reports of the Pasteur Institute, Kasauli 1925, 1926, 1927.

H.10 Work on Public Health Propaganda in Madras (with index by JC) 1921-25; includes JC's Memorandum on 'Health Propaganda' Board, notes for lecture-demonstration, misc. printed health propaganda material, and JC's 'Report on the work done during deputation in England 1921' describing visits to laboratories, tropical medicine schools, equipment manufacturers, etc.

H.11-H.24 Lectures and papers by JC on tropical medicine:

H.11 'Micro-organisms and their relationship to disease' 11 pp. 23 August 1922

H.12 'Snakes and Snakebites' and 'Snake Venom', delivered to Madras Medical College Association. 13 pp. and 14 pp. Sept. 1922

H.13 'The value of the Bacteriologist to the Clinician' 11 pp. 8 Dec. 1922

H.14 'Relapsing Fever', delivered to British Medical Association of Madras Presidency 20 pp. 6 Dec. 1922

H.15 'Some observations on Experimental Inoculation with *Spironemarecurrentis*', given at Lucknow Congress 1922 8 pp.

H.16 'Some factors in racial immunity and susceptibility to disease', read to Royal Anthropological Society, London, 3 June 1925, and subsequently published in Man 24 pp.

H.17 'The Serology of *Spironema Carteri* in the Indian form of Relapsing Fever', to be read at Congress of Far Eastern Association of Tropical Medicine, Tokyo 1925. Text and photographs.

H.18 'Lecture on principles of immunity and inoculation, to P.T. Class, Kasauli, June 7 1926' 8 pp.

H.19 'Review of Acton and Knowles: Dysenteries of India 10/8/28' (some pages missing).

H.20 'Lecture on Tropical Medicine' 7 Feb. 1936

- H.21 'Two talks on gas warfare and treatment. Given to nurses Oct. 1940'
- H.22 On toxins n.d.
- H.23 To 'National Council of Women' n.d.
- H.24 On 'Blood cultures'

H.25 Publications by JC and collaborators. JC drew up a list of his publications, not always complete or in chronological order; the offprints are in the numbered sequence drawn up by him.