

Catalogue of the papers and correspondence of

**CLAUDE GORDON DOUGLAS FRS**

(1882 - 1963)

Compiled by Peter Harper

Deposited in the Library for the History of Neuroscience  
in the Sherrington Room  
of the University Laboratory of Physiology,  
Oxford

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1987

THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

Report on the correspondence and papers of

CLAUDE GORDON DOUGLAS

(1882 - 1963)

physiologist

deposited in the  
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Reproduced for the  
National Cataloguing Unit for the  
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(NCUACS 1/87)

by

THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS  
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## GENERAL INTRODUCTION

### PROVENANCE

The material was received in August 1987 from Dr. D.J.C. Cunningham, the author of the Royal Society memoir of Douglas.

### DESCRIPTION OF THE COLLECTION

The material is presented in the order shown in the list of contents. It includes detailed records of Douglas's First World War work in France on the medical and defensive aspects of gas warfare, and his 'Haldaniana', an assemblage of material relating to Douglas's great teacher and mentor, J.S. Haldane. The collection offers regrettably little documentation of Douglas's scientific activity in the Physiology Laboratory, Oxford University, or of his extensive committee work for government and others.

Section A (Research, teaching, publications) is disappointingly slight. The most interesting material relates to the 1911 expedition to Pike's Peak, Colorado, though this is almost exclusively photographs and newspaper accounts. The expedition was organised by J.S. Haldane to investigate respiration at high altitude and the summit party comprised Haldane, Douglas, Yandell Henderson of Yale and E.C. Schneider of Colorado. The subsection on teaching includes class notes for practical courses on experimental physiology, and the publications subsection the 'ms. of original edition' of Douglas's and J.G. Priestley's book Human Physiology.

Section B (Wartime research) is the most substantial in the collection. The comprehensive records of the First World War gas warfare work presented here appear to be the documentation used by Douglas for his contribution on the development of gas warfare to the Official medical war history. There are many papers by Douglas on aspects of the effects and treatment of gas poisoning, but there are also papers by other distinguished scientists including J. Barcroft, T.R. Elliott and J.S. Haldane.

At the outbreak of the Second World War Douglas went to the Experimental Station at Porton (until October 1941) where he was largely responsible for re-writing the Medical manual of chemical warfare. The papers listed at B.43 - B.49 very probably relate to this work. Douglas was also consulted on nutrition questions during the Second World War and there is material on diet in respect of the army, coalminers and Oxford undergraduates.

Section C (Haldaniana) is Douglas's assemblage of material relating to J.S. Haldane arranged and listed in a chronological sequence. It includes what appears to be an unpublished paper (C.5), obituaries and tributes, and records of the Royal Society Tyndall Mining Research Committee on which Douglas succeeded Haldane as chairman. There is also material for Douglas's talks at the 1961 Haldane Centenary Symposium.

A full account of Douglas's career and research can be found in the memoir by D.J.C. Cunningham written for the Royal Society and published in 1964 (Biographical Memoirs of Fellows of the Royal Society, 10, 51-74), a copy of which is enclosed at A.24.



C.G. Douglas

NCUACS 1/87

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LOCATION OF OTHER MATERIAL

It is intended that letters from J.S. Haldane to Douglas currently in the possession of Dr. Cunningham will be passed on to the National Library of Scotland, Edinburgh which already holds the letters from Douglas to Haldane.

P. Harper

Bath 1987

SUMMARY OF THE CAREER OF C.G. DOUGLAS

b.1882	Leicester
educ. 1895	Wellington College
1898	Wyggeston Grammar School, Leicester
1900	New College, Oxford
1901	Magdalen College, Oxford
1905	Guy's Hospital
1907	Fellow, St. John's College, Oxford
1911	Member, Anglo-American expedition to Pike's Peak, Colorado
1914-1919	War service
1916	Award of Military Cross
1917	Physiological Adviser to the Directorate of Gas Services at G.H.Q.
1918	Temporary Lieutenant-Colonel, R.A.M.C.
1922	Election to Fellowship of the Royal Society
1927	Oliver-Sharpey Lecturer, Royal College of Physicians
1942	Professor of General Metabolism, Oxford University
1945	Award of Osler Memorial Medal, Oxford University
1961	Chairman of the Haldane Centenary Symposium
d. 1963	Oxford



SECTION A RESEARCH, TEACHING, PUBLICATIONS A.1 - A.46

A.1 - A.24 Research  
A.25 - A.33 Teaching  
A.34 - A.46 Publications

RESEARCH

Pike's Peak Expedition, 1911

A.1 List of apparatus taken from England by Douglas and J.S. Haldane.

A.2 - A.5 Press-cuttings from New York and Colorado newspapers with accounts of expedition.

4 folders.

A.6 - A.12 Photographs of expedition members (individual and group portraits), laboratory, experiments in progress.

A.6 Photographs taken by Herald-Telegraph, Colorado Springs, with covering letter, 31 July 1911.

A.7-A.11 Mounted photographs taken by official photographer of the Manitou and Pike's Peak Railway, August 1911.

A.12 Unattributed.

A.13 Photograph of Colorado Springs with view of Pike's Peak. In tube.

A.14 Summit of Pike's Peak via the Cog Road. Booklet of photographs stamped 'Summit of Pike's Peak, Aug. 14 1911'.

Postcard sent to Douglas from the summit of Pike's Peak by American scientists working there, 2 June 1913.

General

A.15 Correspondence etc. re equipment, supplies, 1911, 1920. Includes invoice, price list, photograph.

A.16 Ms data headed 'Douglas Pipettes' on back of Faculty of Natural Science, Oxford, lecture list, Trinity term, 1920.

A.17 'Douglas et al (1921). O<sub>2</sub> breathing during exercise'. Contents of an envelope so inscribed.

Ms data, graphs by Douglas and Mearns, June 1921.

Research, teaching, publications

- A.18 'Control boards and thermoregulator in use in the laboratory at Winnington', October 1928.  
12pp typescript by E.A. Cooke, Research Department, Winnington.
- A.19 'Experiment on circulation rate by class', 1 June 1931.  
1p ms data.
- A.20 Scientific correspondence  
Letter from Y. Henderson, 1938 and re Henderson, 1945; obituaries of Henderson, (d. 1944).  
Duplicated copy of paper by W.M. Boothby, 1950, with ms note from author on title-page.  
Letter from E.L. Kennaway, 1951.
- A.21,A.22 Undated notes, tables, graphs, etc.  
2 folders.
- A.23 Photograph of Douglas with F.C. Courtice, c. 1946.
- A.24 'Claude Gordon Douglas 1882-1963' by D.J.C. Cunningham, (Biographical Memoirs of Fellows of the Royal Society, 10, 1964).

TEACHING

- A.25 - A.27 Physiology teaching material sent to Douglas from the University of Birmingham, ?1934.
- A.25 Envelope in which material was found.  
List of classes for second term junior experimental course.
- A.26 27pp duplicated typescript class notes for the third term practical course in experimental physiology.
- A.27 25pp duplicated typescript class notes for fourth term.

Research, teaching, publications

- A.28 'Physiology. Junior experimental class. (Muscle and nerve experiments)'. n.d.  
Course booklet (17pp duplicated typescript) containing seven class exercises.
- A.29 - A.32 Miscellaneous duplicated typescript course notes, n.d.
- A.29 'Blood' (4pp); 'bile' (2pp); 'normal urine' (3pp); 'abnormal urine' (2pp).
- A.30 'Enzymes' (7pp); 'proteins' (10pp); 'the fats or lipids' (3pp); 'carbohydrates' (6pp).
- A.31 'Quantitative Class'. Notes on the estimation of nitrogen in an organic body, ammonia, amino acids etc (8pp and 9pp).  
Notes on the estimation of urea in the blood and oxygen in the blood (3pp).
- A.32 'The measurement of the hydrogen ion concentration of a fluid' (4pp).  
'Notes on the identification of unknown substances' (4pp).  
'Chemistry of some common foods' (5pp).
- A.33 Duplicated sheets, possibly for class work, n.d.

PUBLICATIONS

- A.34 - A.41 Contents of a brown paper parcel inscribed: 'ms of original edition of Douglas and Priestley "Human Physiology".'  
The book was published in Oxford in 1924 by the Clarendon Press.
- A.34 Unpaginated duplicated ms and typescript 'corrected copy'.
- A.35 pp13-37
- A.36 pp47a-67
- A.37 pp124-135a
- A.38 pp152-163
- A.39 Figures and legends

Research, teaching, publications

- A.40 Letter from M.S. Pembrey to J.G. Priestley re book, 30 July 1923; also figure and experimental results.
- A.41 Proof copy.
- A.42 'The effects of prolonged muscular exercise on the metabolism' by F.C. Courtice and Douglas, Proc. Roy. Soc. B., 1936.  
88pp typescript carbon.
- A.43 - A46 'Pulmonary function: historical.' Douglas's contribution (chapter 1) to Handbook of Respiratory Physiology, Randolph, Texas: USAF School of Aviation Medicine, 1954.
- A.43 Editorial correspondence, 1952-55. Principally with editor W.M. Boothby who died before publication. Other correspondents include a fellow contributor, F.J.W. Roughton.
- A.44 Ms draft paginated [1]-21; figures
- A.45 Ms draft paginated [1]-56;
- A.46 Shorter ms drafts; bibliography.



SECTION B WARTIME RESEARCH B.1 - B.55

- B.1-B.42 Gas warfare, 1915-1920
- B.43-B.49 Chemical Defence Board, Porton, 1928, 1939-1942
- B.50-B.55 Nutrition, 1943,1944.

GAS WARFARE, 1915-1920

Douglas kept almost all his First World War manuscripts and papers in green folders with his own ms titles. These folders have been divided for ease of reference, and Douglas's titles used in the sub-headings. The original folders have not been preserved.

'Notes on the treatment of Gas Poisoning'

- B.1 'Gas poisoning' by Lieut. Col. D. Macauley, South African Medical Corps (4pp), with covering letter, 14 November 1915.
  - 'Poisoning by nitrous fumes and sulphuretted hydrogen', n.d. (4pp).
  - 'Notes on the treatment of poisoning by gas' by J.S. Haldane, n.d. (2pp).
  - 'Notes on the treatment of poisoning by gas' by J.S. Haldane, n.d. (3pp).
  
- B.2 'Directions for treatment of accidental cases of poisoning', n.d. (5pp).
  - 'Provisional notes on treatment of cases of poisoning by gases and vapours', n.d. (2pp).
  - Copy letter from F. Shufflebotham to Director General, Trench Warfare Supply Department, 21 July 1916, reporting on medical inspection of the works where the manufacture of poisonous gases was carried on. (4pp).
  - 'Report on the inspection on July 20th 1916 (from a medical point of view) of two gas factories', by F.A. Bainbridge. (2pp).
  - Letter from Shufflebotham to the Trench Warfare Supply Department Chemical Advisory Committee, 11 September 1916, on white star poisoning. (3pp).
  - Copy of report on the effects of chloropicrin compiled by the French investigators of lethal gases, sent to Douglas for information, 10 February 1917. (4pp).

Wartime research

- B.3 'Polycythaemia following gas poisoning', by J. Barcroft, n.d. (4pp).  
Letter from Barcroft re experiments on rabbits, n.d. (2pp).  
Copies of letters from L. Hill to Colonel Cummins, January 1916 and 1p extracts from letters headed 'Experiments by Leonard Hill on the effects of Phosgene'.  
'Report on the treatment of P.S. poisoning', n.d. (3pp).  
'Experiments made at Cambridge', n.d. 1p duplicated typescript with 1p ms attached.  
'Report on experiments with sulphuretted hydrogen by A.R. Cushney, n.d. (1p).
- 'Mustard gas'
- B.4 'Gas shell bombardment of Ypres, 12/13 July 1917' by Douglas, 17 July 1917 (5pp).  
'Effects of a gas shell bombardment' by Douglas, 24 July 1917. (3pp).  
'The effects of a gas shell bombardment at Nieuport', by Douglas, 26 July 1917. (2pp).
- B.5 'Gas warfare, July-December, 1917. Summary of information bearing on the medical aspects of gas poisoning,' n.d. (5pp).  
'No.25 General Hospital. Hardelet. Points suggested for consideration in preparing a report on gas casualties of intermediate severity.' 1 August 1917. (1p).  
'A report on the morbid anatomy and microscopic changes found in the organs in fatal cases of shell-gas poisoning, due to di-chlor-ethyl-sulphide', by J.W. McNee, 14 August 1917. (6pp).
- B.6 'Pathological changes caused in man by di-chlor-ethyl-sulphide poisoning' by J.R. Marrack (4pp), with covering note dated 3 July 1918.  
'Vesicants', n.d. (11pp).  
'Note on the casualties caused by Yperite in the British Forces' by Douglas, 22 October 1918. (2pp).



Wartime research

B.7 'Medical organisation in German army' by Douglas, 16 October 1918. (2pp).

'French organisation for gas casualties' by Douglas, 17 October 1918. (2pp).

Note. Organisation et fonctionnement des formations specialisees dans le traitement des intoxiques par gaz. (Printed).

'German fuzes'

B.8 'Notes on German fuzes. Fourth report'. 27 October 1918. (5pp).

'German instantaneous fuze with graze action', 2 November 1918. (2pp).

Diagrams.

'Experimental investigations'

B.9 'Rate of hydrolysis of phosgene by water', 8 March 1916. (1p).

Ms and typescript notes of experiments, April 1916.

'Interim report on effects produced on the lungs of mice by exposure to low concentrations of phosgene' by Douglas and A. Renshaw, 18 April 1916. (2pp and 4pp).

'Report on some observations made on convalescent cases of gas poisoning' by Douglas, 23 September 1916. (12pp).

B.10 Copy letter from Douglas to Colonel Cummins, 11 February 1916, re visit to R.A.M. College, Millbank, Cambridge, and Oxford for discussion about protection against poisonous gases. (2pp).

'Report on visit to England, 21-28/7/16' by Douglas, 29 July 1916. (7pp).

B.11 'Effect of box respirator on carbon monoxide', 19 August 1916. (1p).

'Report on boxes filled for experimental purposes with absorption layers differing from standard specification' by Douglas, 10 December 1916. (3pp).

'Tests for deterioration on boxes filled with absorption layers differing from standard specification and on standard boxes', by Douglas, 1 April 1917. (2pp).

'Tests of materials taken from large box respirators returned to the base, obtained from Capt. Lambert, Abbeville, 12/11/16.' (2pp).

Wartime research

- B.12 'The pathological effects caused by gases that act as acute lung irritants' by Douglas, 20 January 1917. (17pp including appendices).

Letter from unidentified writer to M. Fletcher, 31 January 1917, enclosing list of 'investigations required' (1p+1p).

'Resume of papers on acidosis in cases of gas poisoning by J. Barcroft, F.R.S.' by Douglas, n.d. (5pp).

Analyses of air in mines after explosion of enemy's camouflages

- B.13 'Air samples taken after two enemy blows in 13 mine, 29/7/16' etc. (6pp typescript + 1p ms).

'CO poisoning. H<sub>2</sub>S poisoning. Conditions in tanks. Asphyxia caused by diminution of oxygen in the air'

- B.14 'Report on some German casualties caused by gas' and related papers (9pp), with covering note from Douglas, 23 November 1916.

'Report 'on the casualties arising during a gas attack in which Two Red Star was employed' (1p), with covering note from Colonel Cummins to Douglas, 13 February 1917.

'Report on hostile bombardment with gas T.M. bombs on the 9th divisional front on the night of June 5th/6th 1917' by H. Hartley (1p), with covering note, 15 June 1917.

'Report on lethal shell gas poisoning by medical officer attached 28th A.F.A. Brigade' (1p), with covering note, 3 July 1917.

Carbon of letter from Douglas, 9 August 1918, re survivors of salvage party gassed while working in the hold of S.S. Arabic. (2pp).

- B.15 Ms notes of tank experiments, 13 September 1918. (2pp).

Report of experiments 'carried out with a view to discovering the cause of exhaustion in crews in action' by Douglas (4pp), with a covering note, 21 September 1918.

Second copy of Douglas's report. (5pp).

'Report on effects of petrol combustion gases during operations September 24 1918, 13th Tank Battln.' by H.M. Crawford. (2 copies, 2pp and 1p).



Wartime research

B.16 Correspondence with L.R. Broster re ventilation in tanks, October 1918.

'The medical aspects of tanks' by L.R. Broster, 30 October 1918. (17pp + contents list and temperature chart).

'The medical history of the tank corps', n.d. (4pp ms).

'Oxygen administration'

B.17 Letter from Douglas to Colonel Cummins, 31 August 1916, beginning: 'I have been trying to make some rough designs of apparatus to give constant and known rate of oxygen flow through a number of pipes leading to nasal tubes &c attached to a single oxygen cylinder.' (2pp + diagrams).

'The efficiency of different methods of oxygen administration', by Douglas, 24 August 1916 (2pp), with 'tests of Haldane oxygen administration apparatus', 26 December 1916 (1p).

'Haldane's apparatus for the administration of oxygen,' by Douglas, 3 January 1917. (3pp + diagram).

'Haldane's apparatus for the administration of oxygen,' n.d. (3pp + diagram). Not identical to preceding.

'Haldane's apparatus for the administration of oxygen', n.d. (3pp + diagram). With 'case of gas shell poisoning treated by Haldane's apparatus for the administration of oxygen at no.3 Canadian stationary hospital' by Douglas, 4 February 1917 (2pp). See also B.19.

'Calibration of Haldane oxygen apparatus', n.d. (1p).

Diagram of Haldane's oxygen administration apparatus.

B.18 'Suggestion of a home made apparatus for supplying oxygen to several nasal tubes from the same cylinder', n.d. (1p) with ms calculations etc.

Letter from Douglas to Col. Cummins, 26 August 1916, re Draeger oxygen apparatus (1p).

Diagrams of Draeger oxygen administration apparatus and Siebe Gorman "Salvus" mine rescue apparatus.

Diagram of Draeger's inhalations-automat; ms notes on the apparatus (4pp) and letter from Douglas, 19 January 1917, on captured German apparatus (1p).

'Oxygen administration for aviators flying at 20,000 feet,' n.d. (1p).

Wartime research

- B.19 'Oxygen administration at 10 C.C.S. after attack of 8/8/16 - report by Capt. Stokes' (2pp), with covering note, n.d.
- 'Use of Haldane oxygen apparatus in case of gas shell poisoning (Trichlormethylchloroformate), 18 January 1917. (1p).
- 'Case of shell gas poisoning treated by Haldane's apparatus for the administration of oxygen at no.3 Canadian stationary hospital', by Douglas, 4 February 1917. (2pp). See also B.17.
- 'Case of shell gas poisoning treated by Haldane's apparatus for the administration of oxygen', February 1917 (1p), with original of letter on the case incorporated in the report (2pp).
- Clinical notes by Capt. Bevan, April 1917. (1p).
- B.20 'Examples of cases of gas poisoning treated by oxygen administration by Haldane apparatus', 27 February 1918. (5pp ms).
- Case notes and subsequent correspondence, September 1918.
- 'Tests of Haldane oxygen administration apparatus of gas cases', n.d. (1p).
- 'Tests of Haldane oxygen administration apparatus, n.d. (1p).
- B.21 Correspondence, 1917, 1920, re sets of apparatus for the administration of oxygen supplied by Siebe Gorman & Co. and taken to France in 1917 by Douglas and Capt. Auld.
- In 1920 the War Office received a claim for £112-10-0d from Siebe Gorman and Co. for six sets of apparatus. Douglas was able to supply the information that the financial people at the War Office required because he had the medical files of the Gas Services with him for the official medical history.
- Siebe, Gorman & Co.'s booklet on its apparatus for the administration of oxygen incorporating Haldane's paper on the therapeutic administration of oxygen, is included here.

Wartime research

'Interallied conferences, Paris'

B.22 Conference on the physiology and pathology of gas poisoning, Paris, September 17-19 1917. Summary of British communications. (2pp).

'Effects of di-chlor-ethyl-sulphide on man. Microscopical specimens prepared by Capt. McNee.' (2pp).

'Experiments on the effects of di-chlor-ethyl-sulphide. By Dr. J.S. Haldane, F.R.S.' (6pp).

'Experiment performed with a view to finding some means of preventing or reducing the skin lesions caused by di-chlor-ethyl-sulphide'. (2pp).

'Value of venesection. Results obtained on animal at Porton.' (2pp).

'Experiments to determine whether venesection has any therapeutic value in goats "gassed" with small doses of P.S. and C.G.' (1p).

'The influence of oxygen on a patient suffering from the later effects of poisoning with a pulmonary irritant gas.' (2pp).

B.23 'International conference on gas warfare, Paris, March 1-5, 1918. Summary of proceedings'. (11pp).

'Conference on the physiology and pathology of gassed cases, Paris, May 28th & 29th 1917.' (5pp).

'Reports on number of casualties caused by gas and on the case mortality'

B.24 'Gas casualties, first army, 25-27/9/15', by Douglas, 27 November 1918. (2pp ms).

'Gas casualties, first army, 13/14 October 1915', by Douglas, 27 November 1918. (2pp ms).

'A report on the casualties due to gas poisoning resulting from the German cloud gas attacks, December 1915-August 1916, and on the medical treatment adopted' by T.R. Elliott and C.G. Douglas. (15pp).

Lists of gas cases, etc. May, June 1916. (3pp).

Graphs.



Wartime research

- B.25 'Note on the casualties and deaths caused by gas shells, July 1916 to July 1918' by Douglas, 14 August 1918. (7pp).
- 'Note on the casualties and deaths caused by gas shells, July 1916 to July 1918' by Douglas, 14 August 1918. (4pp + 5pp lists of casualties). For another copy, see B.27.
- 'The casualties resulting from hostile bombardment with gas shells containing di-chlor-ethyl-sulphide between the dates 13/7/17 and 4/8/17' by Douglas, 30 July 1917. (15pp ms).
- Ms draft beginning 'in continuation of my report on casualties due to di-chlor-ethyl-sulphide'. (5pp).
- 'Extracts from weekly reports on hostile gas bombardments', August-November 1918. (2pp).

'Chlor-arsin gas committee'

- B.26 'Note on cases of gas poisoning presenting new features' by Douglas, 2 February 1918. (3pp). Cf B.29.
- 'Reports of treatment of gas cases at no.41 stat. hosp.' (11pp + chart showing daily admissions, etc. for May 1918).
- Report on cases of gas poisoning passed through the gas centre since report of 2 August 1918 by W. Douglas Frew, 12 August 1918. (2pp).
- 'Blue cross gassed cases' (5pp) with covering letter from T.R. Elliott, 6 November 1918. Cf. B.29.
- B.27 'Memo on poisoning by chlorarsin compounds' by W.P. Herringham, 24 July 1918. (4pp).
- 'Note on the casualties and deaths caused by gas shells, July 1916 to July 1918' by Douglas, 14 August 1918. (4pp + 5pp lists).
- Translations of German documents, January-July 1918. (4pp typescript + 4pp printed).

'Chlorarsines'

- B.28 'Minute of the effects of certain compounds of arsenic', various dates, 1918. (7pp). Incorporates letter from J. Barcroft.



Wartime research

- B.29 'Abstract. Sur les syndromes cliniques nouveaux presentes par les intoxications recents par gaz de combat', 30 May 1918. (4pp).
- 'Note on cases of gas poisoning presenting new features' by Douglas, 27 January 1918. (4pp).
- 'The effects produced in the field by di-phenyl-chlor-arsine, and by phenyl-carbylamine chloride' by Douglas, 27 February 1918. (1p).
- 'Memo on poisoning by Chlorarsin compounds' by Douglas, 7 August 1918 (4pp), with 'symptoms observed with di-phenyl-chlor-arsine' by A.W. Crossley (1p).
- 'Note on casualties caused by blue cross shell', by Douglas, 28 August 1918 (3pp), with correspondence and notes on 'blue cross gassed cases'.
- B.30 'Abstracts of reports received from corps chemical advisers on the effects produced on the troops by blue cross shell', July-September 1918. (3pp).
- 'Poisoning by diphenyl-chlor-arsine' by J. Ramsay, 7 October 1918. (1p).
- 'Effects produced in the field by shell containing chlorarsines' by Douglas, 22 October 1918. (1p).
- 'Summary of the blue cross casualties suffered by V Corps, May to October 1918, together with personal notes as to blue cross as an offensive weapon,' by A.C. Jessup.
- Four letters from H. Hartley, July 1919, re a case of D.M. poisoning.
- B.31 'A collection of the more important papers bearing on the nature of the casualties caused by shell containing chlorarsines'. In original folder. Includes additional copies of papers by Ramsay and Jessup (see B.30) and papers on 'poisoning with chlorarsine compounds: supposed nervous symptoms.'

'Correspondence'

- B.32 Carbons of Douglas's letters to J. Barcroft, 24 August and 22 December 1918.
- Carbons of Douglas's letters to J.S. Haldane, 15 September, 6 December and 23 December 1916.

Wartime research

- B.33 Letter from H. Hartley to Douglas, 31 March 1919, returning letter from T.R. Elliott to Douglas of 24 March.
- Letter from Lieut. Col. C.H. Reason to Douglas, 5 February 1919.
- Carbon of letter from Douglas to A.B. Soltau, 3 April 1918, with Douglas's correspondence with Y. Henderson attached.

'Captured German Documents'

- B.34 Translations of German documents prepared for medical committee on gas poisoning.

'Articles in journals and newspapers'

- B.35 - B.37 Published articles, press-cuttings, duplicated material, etc. 3 folders.
- B.38 - B.41 Miscellaneous items found with Douglas's gas reprints (B.42).
- B.38 Ms drafts on gases probably for Douglas's official medical history.
- B.39 Lists of titles of medical files in the records of the Director of Gas Service, France.
- B.40 Ms note of duties of physiological adviser, n.d; renewal of contract, 1917.
- B.41 Ms note on Douglas's gas reprints; note on phosgene (4pp); note of explosive mixtures with air.
- B.42 Official booklets on defensive measures against gas attacks; gas warfare monthly summaries of information for August and September 1918; reprints on gases by Douglas, Haldane, Hartley and others. 1 box.

Wartime research

CHEMICAL DEFENCE BOARD, PORTON, 1928, 1939-1942

B.43 - B.49 Contents of a folder incrimed 'Chemical Defence Board (Porton)'.

B.43 Letter from Douglas on occupation of gas-proofed rooms, 9 May 1928 (copied to J. Barcroft); 1p ms note on 'ventilation of gas proof shelters', n.d.

B.44 Correspondence and papers, 1939, 1940 including memorandum on caustic burns of the skin, sent to Douglas in response to a request for information.

B.45 List of secret documents in the custody of Douglas, 1 July 1940 (later amended to 1941); brief correspondence re return of secret documents, July, August 1941.

B.46 Correspondence and papers, 1942, including nomogram for giving vapour pressures and weight concentrations for vapours and volatility-vapour pressure conversion table.

B.47 Ms and typescript notes on the literature.

B.48 Shorter ms notes.

B.49 Background material.

Wartime research

WARTIME NUTRITION, 1943, 1944

- B.50 Correspondence with E.P. Cathcart re army diets, January 1943.  
  
'Information about dietaries received from E.P. Cathcart, January 1943.' (4pp ms).  
  
Correspondence with E. Mellanby re 'food for special purposes like commando operations', September, October 1943.
- B.51 Correspondence with J.C. Drummond, Ministry of Food, re the influence of diet on working efficiency, October, November 1943.
- B.52 Correspondence with E. Mellanby and papers re nutrition of coalminers, November 1943.
- B.53 Correspondence with M. Pyke re Ministry of Food paper on 'the need for research into the best composition, timing and frequency of meals doing different types of work', February 1944.  
  
Folder includes copy of paper.
- B.54 Correspondence and papers re nutrition in Oxford colleges, June, July 1944.  
  
Includes tables of results of study made on undergraduate diets in 1943.
- B.55 Background material.



SECTION C HALDANIANA C.1 - C.28

- C.1 'A letter to Edinburgh professors by a medical student edited, with preface, by a graduate of eminence' [J.S. Haldane], London, 1890.  
  
Photocopy of published text.
- C.2 'The supposed physical basis of life', Cambridge Magazine, 1912.  
  
Haldane's published article only.
- C.3 Haldane's evidence to chemical warfare research departmental committee, appointed to enquire into the manufacture and use of water gas and other gases containing a large proportion of carbonic oxide (53pp), with covering letter dated 19 October 1925.
- C.4 Correspondence on the treatment of carbon dioxide poisoning, British Medical Journal, December 1925.  
  
Published letters from Haldane and others.
- C.5 'The dissociation and re-formation of oxyhaemoglobin and bicarbonate in blood.'  
  
Two typescript drafts (19pp + 24pp) of article by Haldane, with ms corrections and additions, latest reference 1928.  
  
The article does not appear in the published Bibliography of Haldane's work (Blackwell Scientific Publications, 1963). See C.26.
- C.6 'Uses of oxygen and CO<sub>2</sub> in medicine'.  
  
Report of Royal Society of Medicine discussion published in British Medical Journal, January 1932.  
  
Both Haldane and Douglas took part in the discussion.
- C.7 Honorary degree, Oxford, June 1933.  
  
Programme, Oxford University Gazette, press-cuttings.

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C.8 - C12 Obituaries and tributes

C.8 The Times, 16 March 1936.

1927 draft, 1933 revision, correspondence re revision, published version, etc.

Folder also includes press-cuttings re Haldane, 1929, 1934.

C.9 Nature, 21 March 1936.

Published version only.

C.10 'Memoir of the late John Scott Haldane' by J. Ivon Graham.

Excerpt from Trans. Instn. Min. Engrs., 1936.

C.11 Notes for Journal of Industrial Hygiene on Haldane's work in that field by Y. Henderson.

Typescript draft with covering letter from Henderson to Douglas, 7 April 1936.

Folder also includes earlier letters from Henderson to Douglas about Haldane, 27 August 1935 and 28 March 1936.

C.12 Invitation from Royal Society for Douglas to write Haldane's memoir, letters written in reply to Douglas's requests for information, May, June 1936.

C.13 Ms draft of Douglas's letter of condolence, replies from Louisa Kathleen Haldane (widow), J.B.S. Haldane (son) and Naomi Mitchison (daughter).

C.14 Notice of death from Oxford University Gazette, press-cuttings re funeral service, correspondence re arrangements, order of service.

C.15 Letter from J.G. Priestley to Douglas, 2 April 1936 re future of Mining Research Laboratory, University of Birmingham, of which Haldane had been Director.



Haldaniana

C.16 - C.21 Royal Society Tyndall Mining Research Committee

Douglas kept the Tyndall Committee papers with his Haldaniana. In his letter of 17 March 1936, A.V. Hill, then Secretary of the Royal Society, stated that Haldane 'was really the Committee' and invited Douglas to attend the first meeting after Haldane's death since he 'probably knew more about Haldane's ideas and work than anybody else available.' Douglas subsequently became chairman of the Committee. A.V. Hill's letter also notes that the Royal Society had invited Haldane to deliver the Croonian Lecture, but that first his wife's illness and then his own, prevented his coming to discuss it with Hill (C.16).

The material is a chronological sequence of correspondence and committee papers.

C.16	1936	C.19	1940, 1943
C.17	1937	C.20	1945
C.18	1938, 1939	C.21	1953

C.22 Correspondence with editor, Dictionary of National Biography re lives of Haldane and M.S. Pembrey, April-December 1945.

Ms and typescript drafts of life of Haldane.

C.23 - C.25 Haldane Centenary Symposium, 1961.

Douglas was chairman of the symposium and gave two talks on Haldane's work, one on respiratory and circulatory regulation, the other of a more general nature.

Miscellaneous ms notes and drafts for Douglas's talks.

3 folders.

C.26 Haldane Bibliography, Blackwell Scientific Publications, 1963.

C.27 List of Haldane papers in Wolfson College, Oxford with covering letter to D.J.C. Cunningham, 16 June 1975.

C.28 Portrait photograph of Haldane, n.d.

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