

**Collection:** The Darwin - Burdon Sanderson Letters**Names:** Darwin, Charles, Robert, Sir, 1809-1882  
Burdon Sanderson, John Scott, Sir, 1813-1858**Online access:**  [Charles Darwin Letters](#)**Description:** This group of about 40 letters, a part of the Sinclair Collection, consists of correspondence between Charles Robert Darwin (1809-1882) and John Scott Burdon Sanderson (1828-1905) during the years from 1873-1881.

The letters deal with the research Darwin and Burdon Sanderson did on the digestive powers and leaf movements of insect-eating plants, notably *Drosera* and *Dionaea*. Darwin published the results of this research as part of his *Insectivorous Plants* (1875).

There is also correspondence about Burdon Sanderson's (and to a lesser extent, Darwin's) attempts to ensure that the anti-vivisectionists should not secure the passage of a bill through Parliament that should hinder scientific research. Sanderson's efforts influenced the events that led to the appointment of a Royal Commission in 1875 to study the use of animals in scientific research in Britain.

**Dates:** 1873-1881**Location:** Memorial Room Rare Cabinet 27**Items:** 24 cm of textual records

**Inventory:**

- 1873  
June 24 Ch. Darwin, "Down", Beckenham, Kent. To Dr. Sanderson. I.x.  
Asks Sanderson to read the results of his experiments on Drosera and to make any suggestions; explains the object of his research on these plants.  
A.L.S., 1p.
- [1873]  
June 26 Ch. Darwin, "Down", To Dr. Sanderson. I.viii.  
Sanderson is to come to Down and see the research; discusses the different substances that cause movement in the leaves of Drosera.  
A.L.S., 1p.
- Names:** Sir C. Lyell, Huxley.
- 1873  
July 25 Charles Darwin, "Down". To Dr. Sanderson I.xi.  
Discusses the latest results regarding the digestive powers of Drosera and Dionaea; the different substances that cause inflection; the effects of heat and of phosphate of ammonia on the leaves.  
A.L.S., 2p.
- Names:** Frankland.
- Printed in:** Darwin, Francis. The Life and Letters of Charles Darwin, vol. 2, p. 495.  
**Note:** Cataloguing done by Jocelyn Foster, Autumn 1976, as a project for a course in the School of Librarianship, U.B.C.
- 1873  
August 15 Charles Darwin, "Bassett", Southampton. To Dr. Sanderson. I.xiii.  
Suggests that Sanderson test to see if there is any electrical change in the leaves of Dionaea when they are excited and offers to provide the plants.  
A.L.S., 1p.

[1873] Ch. Darwin, "Down". To Dr. Sanderson. I.xiv.  
Sept. 9 He is sending the plants and suggests any results obtained would  
be worth publishing by Sanderson; describes the nature of the  
leaf contractions and the effect of hydrochloric acid on the  
digestive powers of Drosera.  
A.L.S., 1p.

**Names:** Frank [Darwin]

**Printed in:** Darwin, Francis. More Letters of Charles Darwin,  
vol. 2, p. 394.

[1873] Ch. Darwin, "Down". To Dr. Sanderson. I.xv.  
Sept. 13 He is delighted that Sanderson has got a decided result in the  
experiments; discusses the effects of phosphate of ammonia on  
the leaves.  
A.L.S., 1p.

**Names:** Du Bois Reymond.

**Printed in:** Darwin, Francis. More Letters of Charles Darwin,  
vol. 2, p.395.

[1873] Ch. Darwin, "Down". To Dr. Sanderson. I.ix.  
Sept. 14 He asks for help in obtaining pure animal substances – fibrin,  
albumin, mucin and others for further tests of the digestive  
powers of the plants.  
A.L.S., 1p.

**Names:** Frank [Darwin], Dr. Brunton, Frankland, Miller,  
Hoffmann, Müller.

[1873] Ch. Darwin, "Down". To Dr. Sanderson. I.vii.  
Oct. 1 Hopes that his observation about the movement of the motor  
influence from excited glands in Drosera leaves will help  
Sanderson.  
A.L.S., 1p.

**Names:** Frank [Darwin]

- [1873] C. Darwin. [To Dr. Sanderson?] I.xxvi.  
Oct. 18 Some notes about testing the digestive powers of the plants with regards to mucin, globulin, chlorophyll, hemoglobin, chondrin, gelatine.  
A.L.S., 1p.  
**Names:** Dr. Moore, Dr. Brunton.
- [1873] Ch. Darwin, 2 Bryanston St., Portman Square, [London]. To Dr. I.xii.  
Nov. 15 Sanderson. Sanderson is to test proprionic, butyric, valeric acids for artificial digestion to see if one of those is present in Drosera.  
A.L.S., 1p.  
**Names:** Prof. Frankland.
- [1873] Ch. Darwin, "Down". To Dr. Sanderson. I.vi.  
Nov. 19 Sanderson is conducting some experiments with globulin and haemoglobin for Darwin as well as those with the acids.  
A.L.S., 1p.  
**Names:** Dr. Moore, Dr. Brunton.
- 1874 Ch. Darwin, "Down". To Dr. Sanderson. I.xvi.  
March 21 Encloses his manuscript on Dionaea for Sanderson to read.  
A.L.S., 1p.  
**Names:** Mrs. Sanderson, Frank [Darwin].
- [1874] J. B. Sanderson, 49 Queen Anne Street [London]. To Mr. II.x.  
March 23 Darwin. Thanks Darwin for the manuscript; he will send the results of the digestion experiments tomorrow.  
A.L.S., 1p.  
**Names:** Mrs. Sanderson, Frank [Darwin].
- [1874] J.B. Sanderson, 49 Queen Anne Street [London] To Mr. Darwin. II.ii.  
March 30 Some notes on the results of experiments about digestion which are enclosed.  
A.L.S., 1p.
- [1874] Ch. Darwin, "Down". To Dr. Sanderson. I.v.  
March 31 Asks Sanderson to do some more tests with the acids; Darwin wants to test globulin and hydrochloric acid on Drosera.  
A.L.S., 1p.

- [1874] Ch. Darwin, "Down". To Dr. Sanderson. I.iv.  
May 5 Thanks Sanderson for acid experiments; reports on his  
experiments with gluten, dentine, enamel, and fibrin.  
A.L.S., 1p.
- [1874] Ch. Darwin, "Down". To Dr. Sanderson. I.xvii.  
May 14 Compares the effects of pepsin and the fatty acids with the  
effects of the Drosera ferment on fibrin, albumen and other  
substances.  
A.L.S., 1p.
- Names:** Dr. M[oore].
- [1874] Ch. Darwin, "Down". To Dr. Sanderson. I.iii.  
May 27 Discusses whether the ferment of Drosera may differ from  
pepsin.  
A.L.S., 1p.
- 1874 Ch. Darwin, "Down". To Dr. Sanderson. I.xviii.  
June 12 Congratulates Sanderson on his article in *Nature*; has found  
another plant that catches flies and can digest.  
A.L.S., 2p.
- [1874] Ch. Darwin, "Down". To Dr. Sanderson. I.ii.  
June 21 He is concerned about some anomalies between the action of  
pepsin and the Drosera ferment which he is trying to clear up;  
has read Sanderson's two articles on Dionaea and fears he has  
been misunderstood on one point.  
A.L.S., 2p.
- Names:** Frank [Darwin].
- [1874] Ch. Darwin. [To Dr. Sanderson?] I.xxv.  
[August?] Working on the chapter on digestion of Drosera and asks  
Sanderson to clarify some of the results of the experiments about  
digestion.  
A.L.S., 1p. (Torn)
- Names:** Frank [Darwin], Hooker.

- 1874  
Oct. 9 Ch. Darwin, "Down". To Dr. Sanderson. I.xix.  
Wants to know if fibrin, areolar tissue, gelatin and other substances are allied in any way because they affect Drosera in a similar way.  
[Reply follows] Burdon Sanderson suggests that the similarities may be due to the water solubility of certain substances.  
A.L.S., 1p.
- 1874  
Oct. 13 Ch. Darwin, "Down". To Dr. Sanderson. I.xx.  
Darwin argues against Sanderson's suggestion and presents his own idea for consideration.  
A.L.S.
- 1875  
Feb. 10 Charles Darwin, "Down". Dr. Dr. Sanderson. I.xxi.  
Asks about the digestion of phosphates in animals; has written to Huxley suggesting that physiologists and biologists petition for a reasonable act on vivisection.  
A.L.S., 1p.  
  
**Names:** Huxley.
- 1875  
Feb. 12 J. B. Sanderson, 49 Queen Anne Street To. Mr. Darwin. II.xiii  
Answers Darwin's queries about the digestion of phosphates; he is now circulating a memorandum on vivisection which could become the basis of a petition.  
A.L.S., 1p.  
  
**Names:** Huxley.
- [1875]  
April 7 J. Burdon Sanderson. To Mr. Darwin. II.iv.  
Sends Darwin a copy of the Memorial.  
A.L.S., 1p.  
  
**Names:** Paget.
- 1875  
April 10 J.B. Sanderson. To Mr. Darwin. II.xiv.  
He has altered the order and arrangement slightly and asks for Darwin's approval of the changes.  
A.L.S., 1p.
- [1875]  
April 12 J. B. Sanderson, 49 Queen Anne Street. To Mr. Darwin. II.iii  
Sanderson and Mr. Simon have seen Mr. Litchfield's draft of a bill; they want Darwin to inform Lord Derby of the existence of the draft and suggest the next step is a deputation to Mr. Cross.  
A.L.S., 1p.

- 1875  
April 14 J. B. Sanderson, 49 Queen Anne Street. To Mr. Darwin. II.xii  
Suggests Darwin need only write to Lord Derby; rejects the idea  
of an inspector to inspect experiments involving vivisection.  
A.L.S., 1p.
- Names:** Sir Robert Christison, Mr. Huxley.
- [1875?]  
[April?] J.B. Sanderson. To Mr. Darwin. II.i  
Sanderson is to consult Huxley about who should have the right  
to certify the fitness of applicants for License.  
A.L.S., 1p.
- Names:** Dr. Sharpey.
- [1875]  
April 23 J.B. Sanderson, 49 Queen Anne Street. To Mr. Darwin. II.vi  
He will write to Lyon Playfair about the bill; speaks of his  
attitude towards proposed inspectors, has sent some notes to  
Litchfield about the bill.  
A.L.S.
- Names:** Dr. Acland.
- [1875]  
April 28 J.B. Sanderson, 49 Queen Anne Street. To Mr. Darwin. II.v  
He will do nothing till he hears from Playfair and will inform  
Darwin immediately.  
A.L.S.
- [1875]  
April 30 J.B. Sanderson, 49 Queen Anne Street. To Mr. Darwin. II.vii  
Playfair has agreed to introduce the Bill and will try to get  
Cardwell to adopt it; Sanderson thinks there is hope of a  
compromise with the Society for the Prevention of Cruelty to  
Animals.  
A.L.S., 1p.
- Names:** Lord Cardwell, Mr. Colam.
- [1875]  
May 6 J.B. Sanderson, 49 Queen Anne Street. To Mr. Darwin. II.viii  
Cardwell has accepted the Bill and Lord Shaftesbury will  
support it.  
A.L.S., 1p.
- Names:** Lyon Playfair.

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| [1875]<br>Saturday<br>[May 8?] | J.B. Sanderson, 49 Queen Anne Street. To Mr. Darwin.<br>Playfair will ask to bring his Bill in on Monday; Lord Hartimann has not agreed to withdraw his Bill.<br>A.L.S., 1p.                                                                                                                     | II.xi.   |
| [1875]<br>May 23               | J.B. Sanderson, 49 Queen Street. To Mr. Darwin.<br>He thinks Playfair compromised too much and is glad compromise is over; hopes the inquiry will ensure the rights of scientific research and teaching.<br><b>Names:</b> Huxley, Mr. Litchfield.                                                | II.ix.   |
| 1875<br>July 16                | Ch. Darwin, "Down". To Mr. Sanderson.<br>Had read Sanderson's latest essays; will modify some of the passages in the chapters on digestion; is worried what critics will say about it.<br>A.L.S., 2p.<br><br><b>Names:</b> Mrs. Sanderson, Dr. Bastian, Mr. Lister, Mr. Simon, Paget, Dr. Moore. | I.xxii.  |
| [1876?]<br>April 30            | Charles Darwin, 6 Queen Anne Street. To Mr. Sanderson.<br>Makes a suggestion how Sanderson may use his machine to test arterial action.<br>A.L.S., 1p.<br><br><b>Names:</b> Sir H. Holland, Frank [Darwin].                                                                                      | I.i.     |
| 1879<br>May 13                 | Charles Darwin, "Bassett", Southampton. To Sanderson.<br>Asks about the Baly Medal which he has just been awarded.<br>A.L.S., 1p.<br>Names: Baly, Müller.                                                                                                                                        | I.xxiii. |
| 1879<br>May 14                 | J.B. Sanderson, 26 Gordon Square [London]. To Mr. Darwin.<br>Answers his queries about the Baly Medal.<br>A.L.S., 2p.<br><br><b>Names:</b> Mr. Baly, Müller, Mr. Dyster, Ludwig Bernard, Sharpey, Dr. Pitman.                                                                                    | II.xv.   |
| 1880<br>Dec. 29                | Ch. Darwin, "Down". To Dr. Burdon Sanderson.<br>Asks Sanderson to sign a certificate for his son Francis.                                                                                                                                                                                        | I.xxiv.  |



1880 J. Burdon Sanderson, 7 White Rock Place, Hastings. II.xvi.  
Dec. 31 To Mr. Darwin.  
He has signed the certificate; speaks of his forthcoming lecture  
on "the excitable parts of plants".  
A.L.S., 1p.

**Names:** Prof. Munk.

[1881] [Burdon Sanderson's recollections of a visit to Mr . Darwin.] II.xvii.  
Dec. 19 They spoke of matter of current scientific interest, of Darwin's  
latest observations about aggregation in *Dionaea*, and about the  
vivisection issue.  
1p., handwritten.

**Names:** Frank [Darwin], Mr. Farrer, Chamberlain, Paget.

**Notes:** Included with this is a folder distributed by the National  
Anti-Vivisection Society.