

Fragmentary remains, literary and scientific, of Sir Humphry, Davy, bart., late president of the Royal society, etc. : with a sketch of his life and selections from his correspondence / edited by his brother, John Davy.

Contributors

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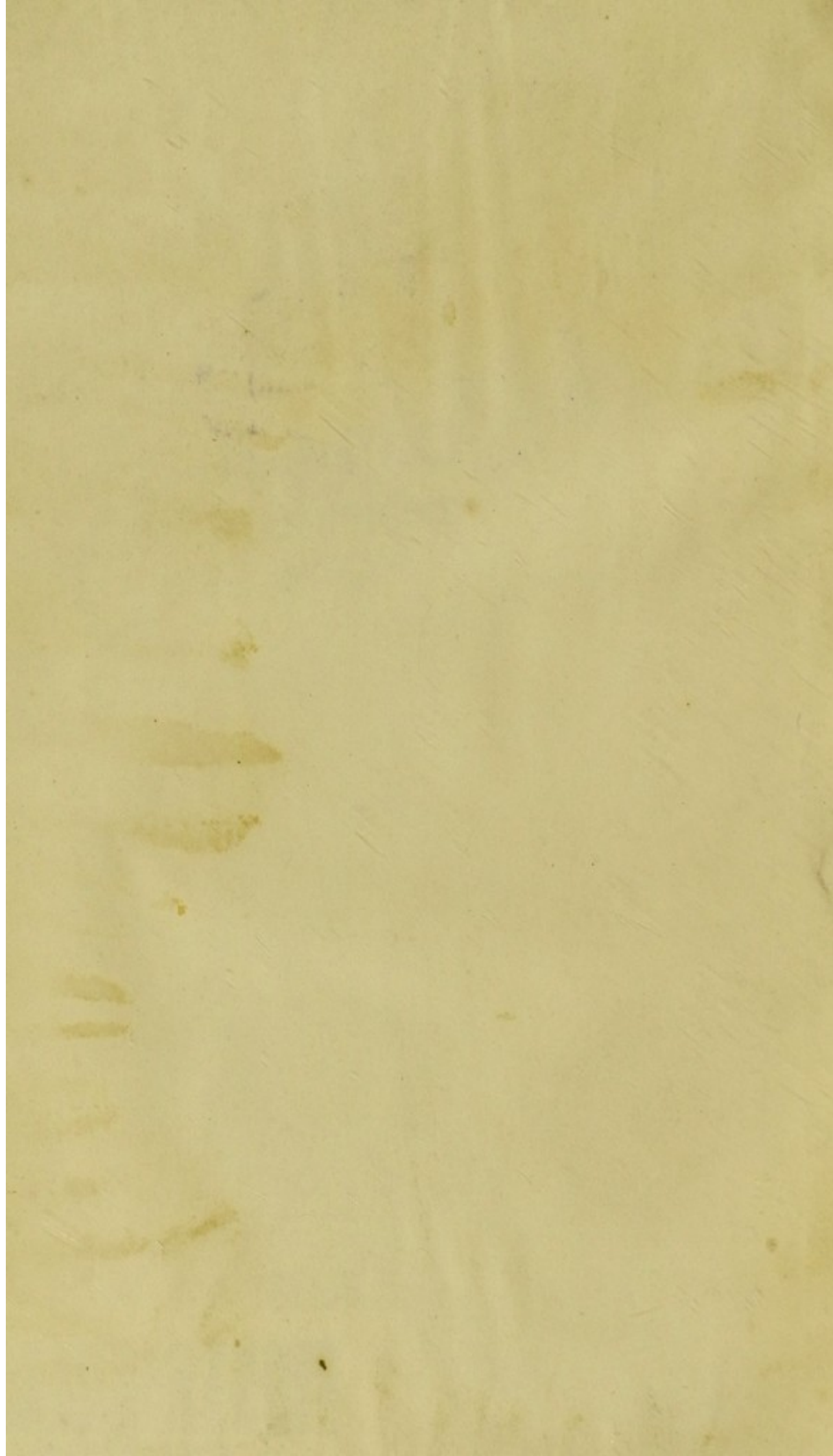
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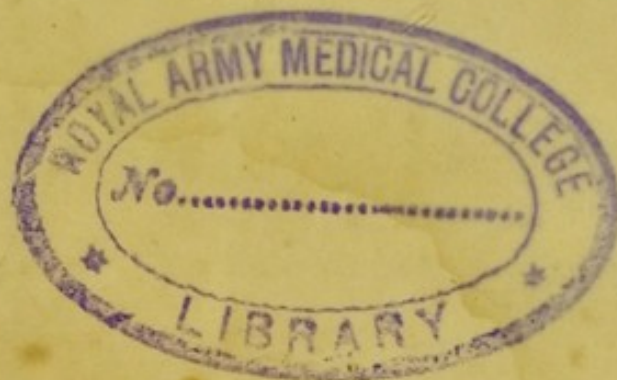


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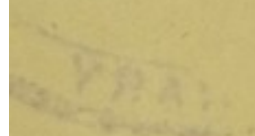
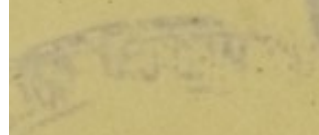


FRAGMENTARY REMAINS,

LITERARY AND SCIENTIFIC,

OF

SIR HUMPHRY DAVY, BART.



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FRAGMENTARY REMAINS,
LITERARY AND SCIENTIFIC,
OF
SIR HUMPHRY DAVY, BART.,

LATE PRESIDENT OF THE ROYAL SOCIETY, ETC.

WITH
A SKETCH OF HIS LIFE

AND

SELECTIONS FROM HIS CORRESPONDENCE.

EDITED BY HIS BROTHER,

JOHN DAVY, M.D., F.R.S.



R.A.M.C
MUNIMENT
ROOM

LONDON :
JOHN CHURCHILL, NEW BURLINGTON STREET.

MDCCCLVIII.

“History may be formed from permanent monuments and records,
but lives can only be written from personal knowledge, which is growing
every day less, and in a short time is lost for ever.”—DR. JOHNSON.

TRO
RANC
all.
DAV



P R E F A C E.

THE title of this work sufficiently indicates its character.

As Editor, the motives which have induced me to undertake it, have been manifold;—first, a loving regard for the memory of one to whom I owe so much, coupled with the belief that these Remains tend further to develop his genuine character; and the fear, moreover, that if not preserved now by publication, they may be neglected, dispersed, and lost for ever; secondly, the hope that everything relating to a man acknowledged to have made important additions to science, and to belong to the list of those whom Bacon places highest in the scale of the benefactors of mankind, cannot be indifferent to his countrymen; lastly, and not least, the belief that the views of science, and the methods of advancing it, which these Remains help to display, and to which, as a discoverer, he chiefly owed his success, may be useful to others—and may they be many—aspiring

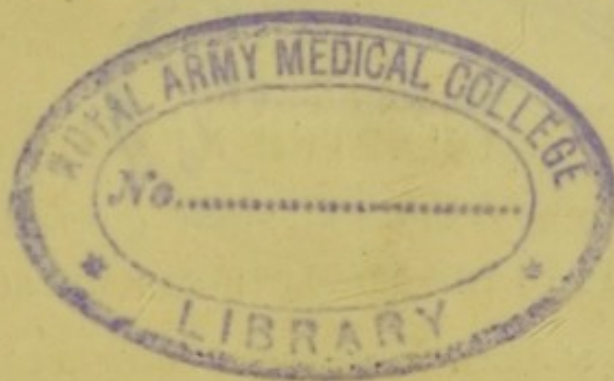
in turn to become discoverers in the boundless fields of scientific research.

It may be asked, why the materials now brought together, have been kept back so long? Why they were not given in the Memoirs published so many years ago? The reason is, that the majority of them were not then in my possession, most of them having been transferred to me since the death of his widow, in May, 1855.

To her Executors, and especially to Dr. Kerr, Lady Davy's nearest blood relation, I have to express my thanks for having committed them to my keeping, with leave to use them. I have the like acknowledgment to make to Mrs. Stackhouse Acton, of Acton Scott, for the letters to her distinguished father, Thomas Andrew Knight, Esq., a selection from which will be found inserted in their proper place. In their proper place also I shall have to return thanks for some other and similar favours from individuals who have honoured me with their communications.

J. D.

Lasketh How, Ambleside, September, 1858.



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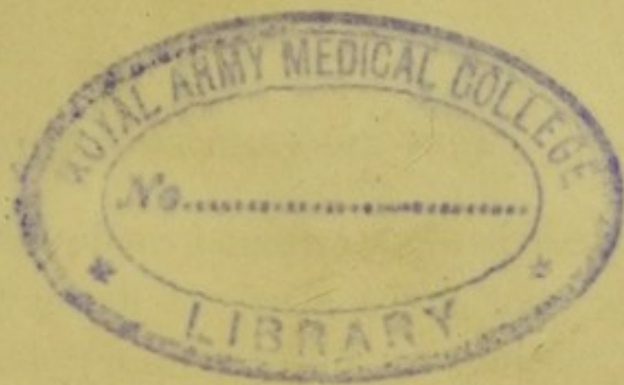
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FRAGMENTARY REMAINS,

LITERARY AND SCIENTIFIC,

OF

SIR HUMPHRY DAVY.

CHAPTER I.

EARLY LIFE AND EDUCATION.

KEEPING in view that these Remains may come into the hands of some readers not acquainted with the memoirs already published of the life of my brother,¹ I shall endeavour, in introducing what is new, to give a sketch of his career, beginning from his birth; and I trust I shall be pardoned if, in a few, a very few instances, I may for completeness' sake reproduce some particulars, or be a little more diffuse than the subject may strictly warrant, indulging, if I may be so permitted to say, in the hope that the words of

¹ The first by Dr. Paris, in 1831; the second by myself, in 1836, and a briefer one prefixed to his collected works (these in nine volumes), in 1839-40.

a scientific friend, to whom I made known my intention, were not mere words of flattery, "That of all things relating to Sir Humphry Davy the world cannot have too much."

He was born at Penzance, on the 17th of December, 1778. Of his parentage, it may be sufficient here to say, that it belonged to the middle class, and to a family both on the father's and mother's side that for many generations—so far back, indeed, as it could be traced—had received a lettered education, and was above the wants which the peasant labourer has to struggle with.

The first-born of five children, of whom three were girls, he was nursed by his mother, and in infancy had an unusual portion of love bestowed on him, and this chiefly, as I have been assured, on account of his precocious mind and endearing qualities. He "lisped in numbers." Till he was six years old he lived with his parents. About that time, he took up his abode with an old gentleman, a bachelor, Mr. John Tonkin, who, in a manner, adopted him; and this was on the occasion of his parents leaving Penzance, to reside at Varfel, about three miles distant, a small copyhold, of about seventy-nine acres, on which his father had built a house.

My earliest recollections carry me back to this respected friend,¹ and he was a friend to us indeed. The memory of him is fixed in my mind not only by his kindness to me as a child—he was fond of chil-

¹ He died in 1801, aged eighty-two.

dren, and liked to have them about him—but also by his benignant and venerable aspect, and his peculiar dress, that of the professional gentleman (by profession he was a surgeon), then passing away—the full wig, the sleeve and breast ruffled shirt, the three-cornered hat, buckled shoe, &c. Well, too, do I recollect the social meetings at his house, exclusively of the gentler sex, a certain number of whom regularly visited him, always drinking tea with him on a Sunday, all of whom he had known as children, and to whom and their children he was attached. Of these, two were sisters, both remarkable for their ladylike and pleasing manners, and one of them, unmarried, not less so for her perennial beauty.¹ Such a little society could hardly have failed to have had an influence on a young mind, and therefore I have mentioned it.

Recollections bring up recollections, reflecting on the past and the bygone generation—for all who then met are swept away—and I cannot but picture to myself what Penzance then was, and its neighbourhood, compared with what they both are at the

¹ The names of these ladies were Mrs. Cornish and Miss Allen. The latter, my godmother, sad to say, at the advanced age of ninety-four, came to an untimely and distressing end, from her dress taking fire. About two years previously, the last time I had an opportunity of paying my respects to her, I found her a very example of happy old age. Never, she assured me, had she been happier. She was standing when I entered the room, and alone, winding worsted, worsted to knit with in the evening, when, she said, her eyes not being so good as they had been, she could not read with comfort, or do any fine needle-work. Would that such instances, without the fatal accident, were common, and then old age would no more require consolation than joyous youth!

present day. Then the population of the town little exceeded 3,000;¹ its wealth was inconsiderable; the habits of the people were simple and frugal; they ate off pewter; a sanded floor was not uncommon in the sitting-rooms of the best houses; its intercourse with the world was very limited, and its trade restricted. So completely is the town changed, that an old inhabitant returning to it now, after the lapse of sixty years, would not be able to recognise a feature of it such as it was in his youth; now so enlarged, as to have a population exceeding 10,000; a railway terminus at its entrance; a Royal Geological Society, with its Museum and other public institutions. In vain would he look for the trees, one of them a fine plane (*platanus orientalis*, indicative of the mildness of the climate), which were the ornament of the street, the very name of which even is changed—the street in which the house of my brother's nativity stood. In vain he would seek that old ruin in Chapel Street, so generally believed to have been haunted, and which young people formerly passed with a hasty step and a feeling of dread after night-fall. In vain he would look for the well arranged piles of massive blocks of tin which glittered and encumbered the market-place;² in vain for that house which belonged to Mr. Tonkin, then a con-

¹ In 1801 its population was 3,382.

² Penzance being one of the towns of the Duchy of Cornwall, to which tin was brought after its reduction, to be stamped before exportation. By a new arrangement, the smelter is now at liberty to ship his tin at any port he finds most convenient.

spicuous one,¹ where now stands the new market-house, even more conspicuous. And even in the immediate neighbourhood, he would find the changes nearly as great: so many villas with their ornamental grounds have sprung up; so much have the adjoining marshes been drained and improved; indeed, were it not for the great landmarks remaining much the same—the impressive and picturesque St. Michael's Mount, the chief ornament of the Mount's Bay, the Lizard Point stretching far out in the east, Mousehold Point and Islet abutting in the contrary direction—he would be utterly at a loss to know again the locality.

These changes no doubt are improvements, and should be matter of satisfaction to those reflecting on them; and yet, I am disposed to think that the former state of things, as less commonplace, as more striking and peculiar, was better fitted to the imaginative mind, and a better nursery of those qualities of mind which constitute genius; I would not except

¹ It was in a room in this house, on the ground floor, having an entrance from the street, that my brother made his first experiments in chemistry, and not in an attic, as stated by Dr. Paris; and it was in this room that he and Mr. Davis Gilbert, his successor in the chair of the Royal Society, often met. On the occasion of laying the foundation stone of the new building, the Market House, one of the aldermen, Richard Pearce, Esq., a schoolfellow of my own, and a fellow-student of chemistry at the Royal Institution, in addressing the meeting, alluding to this room, said, "The spot from which I now address you must ever be memorable. Here it was that the greatest philosopher of the age first devoted himself to that science which has rendered his name immortal;" adding, "I knew him from my early childhood, I studied under him, and I cannot but feel proud of the honour to which you and the council have called me to assist in laying the foundation stone of such a building on this site."

even the then prevailing superstitions, that strong belief in supernatural local agencies which marks an unenlightened people,¹ and which, in the sensitive in infancy and boyhood, is associated with so much that is mysterious and fearful. As in the instance of many other men of genius, this superstitious feeling was strong in my brother, and was fostered probably by his paternal grandmother, to whom ghostly visitations, as she believed, were familiar, and concerning which, in her old age, she could converse with almost as much *sang froid* as on the ordinary daily occurrences of life, though with vastly greater interest. Anecdotes are remembered exemplifying his terrors, when a boy, of the kind mentioned, and of a habit then formed, and it may be presumed in connexion with these terrors, of sleep-walking.

The time, too, was one of a strong religious stirring movement in the country: then John Wesley first visited the far west, and preached with such wonderful effect, making converts innumerable amongst the fishermen and miners, especially the latter, so as in a manner to change the character of the people.

¹ "Within my remembrance," says Polwhele, in 1826, in his 'History of Cornwall,' "there were conjuring parsons and cunning clerks; every blacksmith was a doctor, every old woman was a witch. In short, all nature seemed to be united—its wells, its plants, its birds, its beasts, its reptiles, and even inanimate things, in sympathising with credulity; in predicting or in averting, in relieving or in aggravating misfortune." As late as 1821, I remember conversing with a Cornish astrologer, who cast nativities, and had full faith in stellar action on the destinies of men. His place of abode was indeed far from the busy haunts of men, being near the Lizard Point.

It may, perhaps, be worth mentioning, that my brother came under the notice of this godly man, and had his blessing. It was after attending a meeting held between the regular church services, that, coming out with his mother, the little boy attracted the attention of the venerable old man, and it is handed down in the family, that in his kindly way, he put his hand on the child's head and blessed him, using the words, "God bless you, my dear boy!"

To revert to the scenery of the Mount's Bay, and the influence it exercised over him, writing a few years after, he says (I transcribe from an early notebook):—

"There did I first rejoice that I was born
Amidst the majesty of azure seas,
Surrounded by the everlasting forms
Of mighty rocks, on which alike the waves
And the harsh fury of the storms of heaven
Beat innocent. Eternally allied
Pleasure and hope connected with the scene,
Infix'd its features deeply ; and my mind
Growing in strength with livelier zeal
Still looked on nature."

Bearing on his boyhood I have found two documents, which may be deserving of notice: one a memorandum book kept by Mr. Tonkin, the other a portion of a copybook; both bear the date of 1784. The former is not a little characteristic of the individual and of the times. It is an account of the expenses incurred for my brother, and of what Mr. Tonkin received in the way of presents from Varfel,

as is intimated in the heading of the memorandum; the words are—"This is not meant or intended as a charge against Mr. Davy, only for my own satisfaction to know what Humphry has from me from time to time, and what I have from them." It extends over a period of rather more than ten years, commencing the 29th of August, 1784, and ending February 10th, 1795. The kind of entries shows the very friendly feeling which existed between the two parties: the majority of them specify moneys paid for articles of dress for my brother by Mr. Tonkin, item by item, in minute detail, and the articles of fruit, vegetables, and provisions for the table sent from one to the other as presents. There is mention in them of my brother's going to a dancing school, which was on the 20th April, 1790; of his going to Truro school, viz., on the 17th January, 1793; and of his leaving it, when his school education ended, on the 12th December of the same year; of the purchase of a box of paints, brushes, &c., for drawing, in April, 1792, and of another box of paints with drawing paper, in March, 1794; and lastly, of sixty guineas given "as consideration money" for apprenticing him to Mr. Borlase (afterwards Dr. Borlase), and this in addition to what Mr. Tonkin had previously paid for the year's schooling at Truro, under the Rev. Dr. Cardew, viz., £27 12s. 9d.

The copybook referred to contains texts written in a beautiful hand by Mr. Tonkin himself, as is shown by the initials, "J. T. fecit," at the end. They were intended no doubt as first lessons in writing,

and they might well be first, he then being under six years of age, and also as moral and religious lessons. The following are examples:—

“He hath showed thee, O man, what is good and what the Lord requires of thee, but to do justly, to love mercy, and to walk humbly with thy God.”

“Happy is the man that findeth wisdom, and the man that getteth understanding. The gain thereof is better than silver, yea even than fine gold.

“She is more precious than rubies; and all things thou canst desire are not to be compared unto her:

“Length of days is in her right hand and in her left riches and honour.

“Her ways are ways of pleasantness and all her paths are peace.”

Before going to Dr. Cardew's school, which was esteemed as one of the best in the West of England, he had been for at least eight years at the grammar school of his native town, that one of the worst, being under a careless master, the Rev. Mr. Coryton. The negative manner in which he estimated what he owed to these schools is shown in a letter to his mother, written in 1802, and which has already been given in the *Memoirs of his Life*.

The following fragment from an early note-book may be considered applicable to himself at this period:—“I had scarcely attained my fifth year before letters and words were perfectly at my command. The capricious love of indulgent relations and friends had fortunately for the constitution

of my mind, associated pleasure with the early part of my education."

As a schoolboy, it would appear that he was a favourite with his schoolfellows on account of his good temper and willing readiness to aid them in their tasks; and also for the entertainment he afforded them as a reciter of stories, in which his inventive and imaginative faculties, it is remembered, were early exercised; and of which proofs remain in some sketches of romance which he had planned and begun. His last master, the Rev. Dr. Cardew, records his recollection of him, as being chiefly distinguished for amiability, the good terms he was on with his schoolfellows, and for the superiority of his exercises in translating Latin into English verse: one of his schoolfellows remembered the assistance he and others had from him in the composition of Latin verse.

His self-education, the most important part of the education of every original mind, may be considered as commencing, not so much on his leaving school, as in the year following, the year of his apprenticeship. The death of his father about this time, as well as the entering on a profession, may have had an effect in turning his mind from the idle amusements of youth and in calling out firmness of resolve to apply himself diligently to a course of study. An anecdote, well authenticated, testifies to his firmness of purpose and strength of will and of that mastery, of which he gave other proofs afterwards, of mind over bodily suffering. Bitten by a dog supposed to have been mad, he did not hesitate at

the instant to cut out the bitten part and rub it with caustic.¹ The late Mr. Southey, in relating the incident, said he "was assured by Davy that he had premonitory symptoms of hydrophobia six months after the occurrence."²

In my Memoir of his Life I have described with some minuteness the course of his early studies. The following, from a note-book bearing the date of the same year as his apprenticeship, will give some idea of what he proposed to himself and of what he in part attempted. The copy, I may remark, is literal.

¹ Dr. Paris, amongst his facetiæ, states, though not consistently with the above, that "he roared out most lustily upon being bitten by a conger eel." A writer in the "Quarterly Review," for January, 1858, tells a like story with a variation, that bitten by a crab when bathing, he roared "loud enough to be heard a mile off," a story this, probably founded on an anecdote in Cottle's amusing "Reminiscences of Samuel Taylor Coleridge and Robert Southey," published in 1847; it occurs in page 274. The incident, I may remark, is introduced by one author in refutation of my brother's asserted "disbelief of the existence of pain, whenever the energies of the mind were directed to counteract it;" by the other against "the opinion that pain was an evil;" both propositions in the history of philosophy of old date; and in a certain sense unquestionably true, the mind having to some extent a controlling power, and pain in its intent (as is well shown in the Essay criticised in the Quarterly "on the beneficent distribution of the sense of pain") being designed for a useful and preservative purpose.

² Mr. Southey added, that the only case of hydrophobia cured he had ever heard of, occurred whilst he was at Lisbon: A woman, mad from the bite of a mad dog, was shut up in a room in which there was a quantity of garlic deposited for the use of the family; she ate largely of it and recovered. He said, "unfortunately he had no medical authority for the fact, but he believed, as in the case of whooping cough, that garlic is an excellent antispasmodic."

- | | | |
|-------------------------|---|------------------|
| 1. Theology or Religion | } | Taught by Nature |
| Ethics or Moral Virtues | | by Revelation. |
2. Geography.
 3. My Profession—
 1. Botany. 2. Pharmacy. 3. Nosology. 4. Anatomy.
 5. Surgery. 6. Chemistry.
 4. Logic.
 5. Language, &c.

I have said he “lisp’d in numbers;” the poetical temperament eminently belonged to him;—the “*nascitur poeta*” justly applied to him. Some of his earliest efforts in composition were poetical, and written about this time; and then, as during an after period, seemed no wise to interfere with his severe studies. In a manuscript book, which I have recently become possessed of, a scheme is given of a volume of poems which he then aspiringly contemplated and even began. Of those he had then composed, a few were published in the first volume of the Annual Anthology, edited by Southey. The scheme he proposed is the following, and it is of the same date as that of the plan of his graver studies. Again, I transcribe verbatim.

Prospectus of a Volume of Poems.

- 1st. Eight Odes—1. To the Memory. 2. Sons of Genius.
 3. To St. Michael’s Mount. 4. Song of Pleasure.
 5. Song of Virtue. 6. To Genius. 7 and 8. Anomalous yet.
- 2nd. Cornish Scenes—1. St. Michael’s Mount. 2. Land’s End. 3. Calm. 4. Storm.
- 3rd. A Tale—“The Irish Lady.”

Underneath this programme is written, and in a hand somewhat more flowing—

“ These were the visions of my youth
Which fled before the voice of truth.”

Those readers who may be anxious to see specimens of such early efforts, will find the following in the volume referred to: “The Sons of Genius,” “The Song of Pleasure,” “Ode to St. Michael’s Mount,” “The Tempest,” “Extract from an Unfinished Poem on Mount’s Bay.” All of them bearing any date have that of 1795 and of 1796; the volume of the Anthology in which they appeared was published in 1799. In the MS. book, besides the foregoing there are many more copies of verses, the majority of them incomplete, such as “The Death of Merlin,” “To the Moon,” &c.

At this time, too, he exercised himself also in prose composition, in those speculations, metaphysical and theological, so attractive to the youthful mind of vigour, and to which in later years he reverted, when, being excluded from the laboratory by infirm health, he turned to literature, and composed his “Salmonia,” and “Consolations in Travel.” Specimens of these his early mental exercises are given in the Memoirs.

To resume the personal narrative. He showed an early taste for field and river sports, for angling and shooting, which at this time, as afterwards, he made a recreation, and enjoyed the more from the pleasure he had in the scenery which these sports

made him familiar with, cherishing that intense love of Nature which is so vividly displayed in his latest writings, those just named. The following rhapsody, which I find amongst his "commonplaces" of uncertain date, is a strong expression of this feeling:

"Oh, most magnificent and noble Nature!
Have I not worshipped thee with such a love
As never mortal man before displayed?
Adored thee in thy majesty of visible creation,
And searched into thy hidden and mysterious ways
As Poet, as Philosopher, as Sage?"

Mention has been made of materials for drawing which were procured for him when a boy. These he used with diligence, and was thought by indulgent judges to have acquired some skill in the art. This favourable opinion is indicated by many of his water-coloured sketches having been framed and preserved.¹ His power of sketching, such as it was, which he now acquired, was of service to him afterwards in his geological excursions. His journals of these excursions contain numerous proofs of it in the representations given of any remarkable feature in the rock-formation which he was examining. There is now belonging to the Royal Institution, and to the Royal Dublin Society (the latter copies of the former), a series of paintings from sketches of his by a very competent artist, the late Mr. Webster, designed to

¹ Some of them are in possession of Richard Pearce, Esq., of Penzance, purchased by him at the auction of the effects of a deceased relation.

show the peculiar forms of rocks of different classes, and which were employed to illustrate these forms in his geological lectures. And his after and latest journals of travel afford proof of the same kind, in the figures drawn with pen or pencil of any forms, especially of fish, which were new and interesting to him.

Chemistry, which he marked as a branch of his professional studies, had not, it would seem, amongst these studies his earliest attention. It has been conjectured, but not on good grounds, that the art just alluded to, painting, was his first incitement to the study. According to a statement of his own which I find in one of his early note-books, he "began the pursuit of chemistry by speculations and theories;" adding, "more mature reflection convinced me of my errors, of the limitations of our powers, and the dangers of false generalisations." There are circumstances which lead to the conclusion that he did not give his attention to it, or at least enter on the pursuit experimentally, till 1798, and then so ardently did he engage in it, that in the marvellously short space of four months he had formed peculiar views of his own respecting heat and light, in opposition to those then commonly received, and was in correspondence with Dr. Beddoes on the subject, who shortly confessed himself a convert to them.

One circumstance was specially favourable, and it probably, more than anything else extraneous, conduced to this rapid advance, viz. an intimacy at this time formed with Mr. Gregory Watt, the talented

eldest son of the illustrious James Watt. An invalid, he came to Penzance for the benefit of its mild climate in the winter of 1797, and remained there during the following spring. Having just then completed his college education, well instructed in the sciences, and especially fond of chemistry and geology, his conversation, and the discussions resulting, must have been peculiarly informing and exciting. Now, a friendship was formed between them which was interrupted only by death. In a note-book bearing the date of 1805, the year following that in which he was so prematurely lost to science, my brother thus alludes to him: "He devoted even his last days to promote the interests of science,¹ and he gave birth to that knowledge which he had collected, and which he thought would be useful. His mind seemed to become more *active* and more energetic in proportion as his bodily strength decayed.....I shall be pardoned for having said so much concerning a man whose name perhaps has never before reached the greater number of my audience. I trust I shall be pardoned, for he was one of the earliest of my friends." This was evidently written in preparation of a lecture. Further on, portions of their corre-

¹ The only paper that I am aware of published by him, and by which he will be known in after times as a cultivator of science and an original inquirer, is his "Observations on Basalt, and on the transition from the vitreous to the stony texture which occurs in the gradual refrigeration of melted Basalt, with some geological remarks." This paper is to be found in the Transactions of the Royal Society for 1804, and is worth consulting, as forming part of the basis of the most approved geological theory of the present time.

spondence will be given. Another circumstance which favoured such a rapid progress was the then infant state of chemical science, rendering the elements of it of easy attainment, especially as made plain in the masterly logical theory of Lavoisier.

Amongst his early researches conducted at Penzance were those on the respiration of fishes, and of zoophytes, establishing the fact—the first to establish it—that oxygen is essential to the existence of these classes of animals, that they breathe the air contained in the water, and, like the higher classes of land animals, convert the oxygen, by the addition of carbon, into carbonic acid gas.

The correspondence alluded to commenced with Dr. Beddoes was an eventful one; it terminated in an offer from him, the acceptance of which opened a new course of life to my brother, and brought him from his native place to Clifton, to become superintendent of a pneumatic institution then about to be established, the main intent of which was to make trial of different gases for the purpose of ascertaining their medicinal effects in various diseases. Sanguine indeed were the expectations which were at the time entertained of the results; and may we not say that they were in part justified? and certainly they were not chimerical, considering the recent discovery of vapours, anæsthetic agents, under the influence of which the body is rendered insensible of pain, and the severest surgical operations are deprived of their terrors. His researches on nitrous oxide conducted in this institution may be viewed as

foreshadowing those later ones. In proof it may be mentioned, as if he were on the very threshold of this blessed discovery, that in his concluding remarks contained in the volume of his *Researches on Nitrous Oxide*, the laughter inspiring gas, he asks: "Does not sensibility more immediately depend on respiration?" A pregnant and profound query; and it is shortly followed by this suggestion: "As nitrous oxide in its extensive operation appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place."¹

To enable him to accept the offered appointment to this new institution,² he required to be freed from the engagements to which he was bound by his indentures, the period of his apprenticeship not having expired. Mr. Borlase acted on the occasion very generously, liberating him entirely "on account of

¹ *Researches on Nitrous Oxide*, p. 329.

² The Pneumatic Institution, it is worthy of remark, next to Dr. Beddoes, its originator, owed its establishment mainly to two philanthropists, Mr. Lambton, the father of the late Earl of Durham, and Mr. Thomas Wedgwood, they in their love of science and of inquiry, and the hope of benefiting mankind, supplying the principal funds, the former £1,500, the latter £1,000. Well might the son, the earl whose education commenced about the same time under Dr. Beddoes, and who then formed the acquaintance of my brother, feel gratification when in his ripe manhood he addressed in glowing terms the discoverer of the safety lamp, on the occasion of presenting him the testimonial from the coal owners of the north of England, of which he was one of the principal. It might have then occurred to him, reflecting on the past, here, in this gift of science to the miner, is a return with interest for my father's contribution.

his excellent conduct; and because," he writes, "being a youth of great promise, I would not obstruct his pursuits, which are likely to promote his fortune and fame." This is from the back of the indenture, signed by Mr. Borlase on the 1st October, 1798; and on the following day, before he was twenty years of age, he left his home to enter upon his public career.

CHAPTER II.

CLIFTON—HIS EARLY RESEARCHES AND CORRESPONDENCE.

AT Clifton, at the Pneumatic Institution, he remained scarcely two years and a half, having left it for London, to become Professor of Chemistry, at the invitation of Count Rumford, in the Royal Institution of Great Britain—the high name in full by which the Institution in its modest abode in Albemarle Street was designated.

During this short period he was intensely engaged in varied and interesting research. Here he completed, and gave to the world his first essays, those on Heat and Light; not the least characteristic of his writings and most characteristic of youthful genius:¹ here, he prepared a more important work, giving a detailed account of his researches on nitrous oxide, which at once established his character as an

¹ Amongst the anticipations in these Essays, one deserves to be specially mentioned; and I cannot do better than use the words of the distinguished physiologist, when reverting to it:—"Le fait de la co-existence de l'oxygène et de l'acide carbonique en dissolution dans le sang, constaté en 1799 par Humphry Davy, mais oublié ou révoqué en doute par le plupart des physiologistes du commencement du siècle, se trouva donc pleinement vérifié."—*Leçons sur la Physiologie, &c.*, par H. Milne Edwards, vol i., p. 444.

original inquirer: and here, he commenced those experiments on voltaic electricity, which, afterwards diligently prosecuted, resulted in some of his most important discoveries.

His appearance at this time and his manner are described by one ¹ to whom he was introduced shortly after his arrival at Bristol, and who cherished ever after a warm regard for him; I quote his words. "I was much struck," says Mr. Cottle, "with the intellectual character of his face. His eye was piercing, and when not engaged in converse, was remarkably introverted, amounting to absence, as though his mind had been pursuing some severe train of thought scarcely to be interrupted by external objects; and, from the first interview also, his ingenuousness impressed me as much as his mental superiority."²

Never perhaps was a life more happy than that which he here led, under Dr. Beddoes' roof, kindly received into his domestic circle, with a well-appointed laboratory at command, and in the enjoyment of a society of no ordinary kind. It was here he formed the acquaintance, soon ripening into friendship, of Southey and Coleridge; and in familiar intercourse with them and other congenial minds, whilst his energies were chiefly directed to chemistry, he did not neglect general literature nor even poetry entirely.

¹ Mr. Joseph Cottle, the well-known publisher in the early part of the century at Bristol, author of "Alfred," and other poems, the friend of Southey and Coleridge, of both of whom he has left a record in his amusing and instructive "Reminiscences" of these distinguished men. He died at Firfield, near Bristol, in 1852.

² Cottle's "Reminiscences of S. T. Coleridge and R. Southey," p. 263.

His letters from hence and those to him from his early friends, Mr. Gregory Watt, and the two eminent men just mentioned, with extracts from his commonplace book, best display what I have thus briefly adverted to. Little comment is needed in introducing them. Of his letters to his home I shall give only one; others displaying his affection for home will be found in the Memoirs of his Life. Of the letters from Mr. Gregory Watt, a few may suffice; those kept back are of a more commonplace kind. The letter from the illustrious improver of the steam engine, which shall introduce those of his son, cannot but prove interesting from the subject of which it treats (an air-breathing apparatus on a large scale), with queries and suggestions on the use of what, in the language of the day, he calls factitious airs, and especially interesting now that attention is again directed to the action of gases and vapours on the animal frame. I regret to have to say that all the efforts I have made to recover my brother's letters to Southey have been fruitless; and the same remark applies to his letters to Coleridge, with the exception of two, for which I stand indebted to the late Mr. Wordsworth.

To his Mother.

Pneumatic Institution, September 1, 1799.

My dear Mother—I take an opportunity of writing by Captain Borlase, who is with me to-day and whom I like much: he appears a sensible, unaffected man.

I wrote to my aunt Millett a week ago. You accuse me of not writing often enough : I can say the same of you. You have leisure ; I have much to do. Most of you have only one correspondent ; I have forty. You have but one person here to interest you ; there are twenty in the Mount's Bay that I wish to hear of.

We are going on gloriously. Our palsied patients are getting better ; and, to be a little conceited, I am making discoveries every day.

Tell Kitty¹ to write to me ; and if her letter is a good one, well written and well spelt, I will write her a long letter in return. Locks of hair are silly things, but I have sent one. I hope John's hand and head will improve together. Endeavour to make him fond of reading and drawing, or of any amusement that will give habits of attention. He must be praised for his imperfect performances, and he will improve. The germ of future abilities must be produced by giving him a desire to distinguish himself for something, no matter what.

Kitty should read and write more than work. Give her history, give her tales, give her anything but commonplace novels, so you can but make her fond of reading. If I am not mistaken, all the children have good abilities.

Elegant education is of little importance. The cleverest women that I know can neither dance, sing or play on the harpsicord. After Betsy² has learnt French and English perfectly, I should not trouble myself by keeping her with Miss E. C. Imitation has a great influence, and I would not wish any sister of mine to be like that lady in everything.

I have sent you with this some copies of a poem on the place of my nativity ; but do not suppose that I am turned poet : philosophy, chemistry, and medicine are my profession. I had often praised Mount's Bay to my friends here : they

¹ His eldest sister.

² His youngest sister.

desired me to describe it poetically—hence this poem, which, as they admired, I published.

You will communicate as much of this letter to the Doctor¹ and my aunts as may interest them; and believe me to be, with love, esteem, and affection for those who demand it of me, my dear mother,

Your most affectionate son,
HUMPHRY DAVY.

From James Watt, Esq.

Heathfield, Birmingham, Nov. 13, 1799.

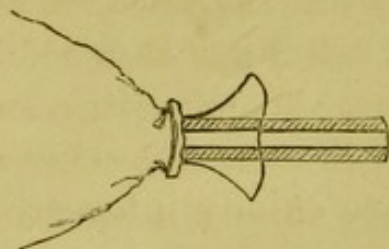
Dear Sir—When I was at Clifton, we had some talk about a breathing chamber, but I was then too idle to collect my thoughts on the subject. My proposition for oxygen and other more precious airs, is to make a chamber like a sedan chair, about two and a half by three feet square, and five feet high, the sides and top to be of framework with canvass stretched upon it, and covered with paper, pasted on by an upholsterer, both outside and inside. When that is done, the *outside* may be painted, if judged necessary; but I believe it will not be found so. The seat should be boxed up down to its floor to prevent lodgments of air under it. On each side and in front should be a pane of glass about twelve by eighteen inches, that you may see the patient during his confinement. The door should be in front, and made to shut close, with a double rabbit, edged with woollen cloth to make it shut tight.

In the top or near it, should be a hole about two inches diameter to shut with a plug, for letting out the common air as you put in the factitious. The latter should be put in at a hole in the side about the height of the knee; and the patient should be furnished with a feather fan to mix the airs well together from time to time, with which he should sweep all the corners within his reach.

¹ Mr. John Tonkin.

When H.C.¹ is to be administered, I think you need not be so nice as if you employ an air holder; in any closet tolerably tight, and not more than eight or nine feet cube, and mix the air well, he will get enough of it, if he stays there half an hour; the attendant may go into the room and assist in mixing the air, and then make his escape. A few ounces of the pyro-succate will infect a whole laboratory.

To breathe the gaseous oxide easily, make a tin mouth-piece, like that of a speaking trumpet, with a short tube about an inch in diameter to which the bag is tied; let this tube be narrowest at the inner end, and fit it to the big end of one of the wooden faucets which fit the air holder, thus—



When you have introduced the air, press with your hand a part of the bag over the internal opening of the trumpet mouth-piece and withdraw the faucet—apply the mouth-piece instantly to the fellow's chops, and free the passage into the bag. The man will then breathe out and in quite naturally, and without strain to his lungs; so that the bag will in fact become a breathing chamber. As this air does not hurt the lungs, might not a mixture of it and H.C. or fixed air be given to pulmonic patients?

As gaseous oxide hurts hysterical and nervous patients, might not that old established air for such complaints be of use?—I mean the air of burnt feathers: put feathers into a fire-tube with a small external opening, and by putting the tube into the fire, poison the air of a room with the fumes. I object to burning the feathers with access of air, which destroys much of its potency. Query, this air or that of

¹ Hydro-carbon.

wool in pulmonics? The latter discharges an uncommon quantity of volatile alkali.

I wrote lately a circumstantial account to Dr. Beddoes of the effects of a pint of H.C. breathed out and in of a bag, to which I refer. I think it speaks much in favour of breathing chambers, but take care your mixtures be not too strong.

I send also a process for making the nitrate, which I hope you will try. You may get easily large quantities of ammonia from woollen rags in the old manganese pots, and receive the air in water mixed with vitriolic acid. I remain, with esteem, Dear Sir,

Your faithful servant,

JAMES WATT.

The next letters, those from his friend, Mr. Gregory Watt, are chiefly interesting, as the familiar outpourings of one congenial mind to another, and as affording proof of the esteem, of the affection of one to the other.

From Gregory Watt, Esq.

London, January 28, 1799.

Dear H.—The newspapers have perhaps before this time informed you of the auspicious issue of our legal conflict.¹ The brilliancy of our success is undiminished by any unfavourable circumstance, and we are again triumphant over our opponent. To use the language of the day, I hope our success may be followed by a speedy and durable peace.

I have been for some time most eagerly expecting the essay you promised to gratify me with, which would have been immediately forwarded from Soho to me here. Do not delay

¹ Relative to a patent right connected with the steam-engine, which had been invaded.

sending it a moment after you receive it from the printer. I have done what I could to diffuse anticipated fame, not by communicating prematurely, but by deserved encomiums, and have excited no small anxiety among several of the *cognoscenti* of my acquaintance. I shall have it in my power to add several specimens to the few things you have looked out when at Heathfield, which I will despatch immediately on my return to Soho, which I expect will be very soon. I hope to find the cargo of Strontites you promised me, as I mean to set vigorously arranging the new materials I have procured for my little cabinet.

I have no scientific news to communicate: you have as early access as myself to foreign journals, and very little is doing at home. Oblige me so much as to send me a few lines, telling me what new speculation you are engaged in, and when I may expect your *works*.

Present my best respects, and those of my father and brother, to Dr. and Mrs. Beddoes, and believe me, dear H.,

Very sincerely yours,

G. WATT.

From the Same.

Soho, March 24.

My dear Alchemist—Almost every day since my return home, have I indulged the hope of hearing from you, and I believe it is superfluous to add, that I have been always disappointed. What in the name of the muses has so completely absorbed you, that not one half hour could be spared for your eagerly expectant correspondent? Independently of the many interesting results of experiments still under consideration, with which I expected to have been gratified, I made no doubt that I should have derived no small information from the new

facts with which no doubt your inventive genius has enriched the world.

In perusing the Anthology, I with pleasure renewed my acquaintance with some of the poems you so obligingly gratified me with when at Penzance, and was much pleased with the ode to St. Michael's Mount, which you recollect endeavouring to recite on that memorable day when I had the honour of being your mystagogue in your initiation into the orgies of the mirth-inspiring Bacchus. I presume the new volume of the "Annual Anthology" is published, and hope it is adorned by some of your contributions. In common with all friends of gaiety and good humour, I rejoice in the recovery of Mrs. Beddoes, an event which was, when I was last at Clifton, rather to be hoped than expected. Present my congratulations to her and the Doctor. I hope the fine weather, which has auspiciously commenced here, will induce you to visit this neighbourhood soon. Poor Thomas Wedgwood, I understand from his brother, has sailed for Nevis. God send him a prosperous voyage and a speedy return, with such health as may enable him to display those abilities and virtues with which he is so largely endowed.¹ After dissipating a few days in the idleness of Bath, myself and companions returned home, and here have I continued ever since. For more than a week I have been confined to the house by an enormous tumour on my face. I hope soon to be emancipated, as it is now diminishing rapidly. Have mercy therefore on the sick

¹ Further on, some particulars will be given of this remarkable and excellent man. As a man of science and an original inquirer, his name will be handed down to posterity by his ingenious experiments on the production of heat and light, published in the Philosophical Transactions for 1792, and as being the first who attempted photography, that wonderful art, hardly second to any in its useful multifarious applications. An account of his early trials will be found in the Journal of the Royal Institution, published in 1802, with an extension and modification of his process by my brother.

and low in spirit, and favour me with a letter which, coming from your hand, will contain all the soul-awakening effects of the gas nitrous oxide. The conversion of Robinson, Boulton, and myself, has operated to the conviction of some unbelievers here, and damped the audacity of others. We have been most zealous apostles, and have met with more credit, as we were materially affected ourselves. Flattering myself that I shall soon receive an ample, and *sans doute* an interesting communication from you,

I remain your very faithful friend,

GREGORY WATT.

From the Same.

Soho, February 7, 1801.

My dear Philosopher—Perhaps I ought to reproach my own negligence for having suffered so long a period to elapse without soliciting a letter from you. If I *alone* am to blame, I have been sufficiently punished by being deprived of your correspondence for so considerable a time. I now bend in contrition, and humbly request you will accept as a peace-offering a copy of Burns' life and performances, which I forwarded to your address by yesterday's Bristol mail, and which I hope has before this found its way to the seat of science, and smoothed your brow by the pleasing magic of its contents. Truly, I know of no incantation more beguiling than that of genuine poetry. Its attacks are exquisitely insidious. The unwary victim opens the potent volume; he reads, and perhaps with listless inanity, but as he reads the spell commences its imperceptible operation; as he advances, the charmed numbers acquire more force; the magical fetters embrace him more closely, and he unconsciously exists in a circle of enchantment—his senses are gradually bewildered in a delightful maze; unable to retreat, he eagerly advances deeper and deeper,

till he is only delivered from his fascinating entanglement by the end of the performance, and he is left with indistinct recollections of pleasure, and the uncomfortable conviction of the termination of his delight. Don't you agree with me in thinking that all such sporters with the feelings of the world should be capitally punished, their works burnt by the hangman, and their aiders and abettors whipped? You, my dear philosopher, have wisely relinquished the stormy Parnassus, where transient sunshine only contrasts the cloudy sky, for the mild and unvarying temperature of the central grotto of science. In those calm and undisturbed retreats, guided by light of your own creation, a light always abundant, and often of transcendent splendour, you pass your happy hours. Condescend to impart to me a single ray, that my eyes may trace you from a distance through your wanderings in those untrod and obscure regions, of which but a single portion is illumined by the blaze Newton kindled on the altar of science. Adieu, my dear philosopher, and soon irradiate thy sincere admirer,

IL TENEBROSO.

Oh, that I could hear of the reformation of that profligate Clayfield !

A break occurs in their correspondence, partly owing to Mr. Gregory Watt having been on the continent, chiefly in Italy, on account of his health; the last letter received from him which is preserved, was written at least three years after the preceding, and shortly before his death. It is inserted here for the sake of arrangement. In the Memoirs of my brother's life, an extract is given from a letter addressed by him to their common friend, Mr. Clayfield, on the

occasion of that mournful and unexpected event. It is chiefly remarkable, not for the expressions respecting the uncertainty of life, but for reflections of a less common-place kind, tending to show how, from a philosophical point of view, and on the ground of natural religion, the proposition of the "non omnis moriar" may be sustained.

From the Same.

Soho, March 21, 1804.

Dear Davy—It is long since I have written to you, or received a letter from you, but the voice of public admiration acquaints me with your increasing celebrity, and the visits of my friends to town procure many opportunities of hearing of your welfare. I cannot assume much merit in addressing you now, as I have a purpose to answer. I am informed that the *Linnæan Smith*¹ reads lectures on Botany at the Institution. When I was at Naples, Dr. Thomson there gave me a specimen which he desired me to transmit to Dr. Smith. The case which contained it and other minerals was long in coming home, and since it arrived I understood that Dr. Smith resided at Norwich, and only came to town in spring. I therefore kept it by me till I could have a safe opportunity of sending it to him. After all this preamble I scarcely need tell you, that I beg you will take the trouble of sending or giving it to Dr. Smith. It is in the parcel accompanying this letter.

I have lately had a large experiment made on the regulated cooling of seven hundred weight of Rawley ragg (a basalt you know). The results have been very curious. I shall send an ample series of specimens to Mr. Greville, where you may see them, accompanied by some observations.² In another experi-

¹ The late Sir James Edward Smith, the first president of the Linnæan Society. He died in 1823.

² See note, p. 16.

ment I made on Carrara marble confined in an iron tube, perfectly closed at one end by a screw, the tube, which was immensely strong, was burst by the expansion of gas. The gas emitted was hydrogen, and burnt furiously, but the marble was partly quick, and all the outsides of the lumps coated with charcoal, as if they had been painted with lamp black. Surely this must have proceeded from a decomposition of the fixed air; the oxygen took hold of the iron of the tube, but whence came the hydrogen? Precautions were taken to expel moisture previously to closing the tube. Let me have your opinion on this subject. I have little news, except that I have found the red tourmaline of Siberia, tourmaline apyre of Haüy in a micaceous shistus from Aberdeenshire, and the staurotide of Haüy, granatite or *granatine* of Saussure, in a syenite from near Strontian. This adds two rare articles to the list of British minerals.

Tell me what you are about, and what are your schemes. Write to me as soon as you can, and believe me very truly yours,

GREGORY WATT.

Pray are you the ingenuous young man to whom Lord Camelford¹ has left a legacy? I hope you are.

The letters of the late Mr. Southey which follow, show how intimate and confiding was their friendship at this period, and also the high estimation in which he held my brother's powers, even as a poet. That this early friendship was not afterwards cultivated is proved, not only by a cessation of correspondence, but also from a statement which appears in one of those "selected letters" of the poet laureat recently

¹ The last of the title, the eccentric lord who was shot in a duel. No legacy was left by him to my brother.

published by his son-in-law. It is written in a tone—to speak of it mildly—not of kindness, which I would fain think arose from some morbid feeling connected with failing health and declining mental powers; for sure I am, that though they were separated by distance, and even more so by difference of pursuits, my brother never lost his regard for Southey: if there were neglect, I am disposed to believe it was on the poet's part. Even late in life, there is evidence that Southey in his better mood of feeling retained some of his old regard. In a foot-note, to be found in the first volume of the *Memoirs of my brother's Life*, I have given a part of a conversation between Southey and a lady, a valued friend of mine, respecting my brother, held shortly after his decease, and communicated to me by letter almost immediately after the interview at Keswick. I shall repeat her words:—

“His eyes filled with tears, when he said, ‘Davy was a most extraordinary man; he would have excelled in any department of art or science to which he might have directed the powers of his mind.’” My friend said, “Might he have been a poet?” “Yes,” was his reply, “he had all the elements of a poet; he only wanted the art. I have read beautiful verses of his;” adding, “when I went to Portugal I left it to Davy to revise and publish my poem of *Thalaba*.” I dwell on this conversation the more, hoping that as in one case, that of my brother, the chord of friendship was relaxed, so it might have been in the other (in Southey's), and not broken. There is pain accompanying the thought of old acquaintance being forgot,

and much more in the idea of an old friendship breaking, and such a friendship as the letters which follow denote. That this is a just explanation, I think is confirmed by the following letter, addressed to a dear and honoured friend, related to me by marriage, the late Mrs. Fletcher:—

Keswick March, 30th, 1831.

Dear Madam—No one lived in habits of greater intimacy with Davy during the greater part of his residence at Bristol than I did, but very few letters ever passed between us. If I can find any among an accumulation of old correspondence, which it requires some courage to examine (time having rendered it a mournful task), they shall be of course, as they ought to be, at his brother's disposal. My recollections of these times are very vivid, and well may they be, for they were some of the best years of his life and of mine also. They do not afford much for relation, but with the help of some comments upon Dr. Paris's book, which I shall look over for that purpose, they may afford matter for a letter¹ to Dr. Davy, and I can point out his brother's poems in the two volumes of the "Annual Anthology," 1799 and 1800.

Had I known you were at Tadcaster, I should have had much pleasure in calling on you when I passed through that place at the end of October last. You would have seen a grey-headed man, but one with whom time has dealt gently.

Believe me, dear Madam, with sincere respect,

ROBERT SOUTHEY.

From Robert Southey, Esq.

Thursday, May 4th, 1799.

Your "Mount's Bay," my dear Davy, disappointed me in

¹ A letter I fear never written; certainly never received.

its length. I expected more, and wished more, because what there is is good ; there is a certain swell, an elevation in the flow of the blank verse, which, I do not know how, produces an effect like the fulness of an organ-swell upon the feelings. I have felt it from the rhythm of Milton, and sometimes of Akenside, a pleasure wholly independent of that derived from the soul of the poetry, arising from the beauty of the body only. I believe a man who did not understand a word of it would feel pleasure and emotion at hearing such lines read with the tone of a poet. The character of Theora is, I think, out of place ; it is not a common character, and the story is noways influenced by it : the passion to be excited is *pity*, not admiration.

I must not press the subject of poetry upon you, only do not lose the feeling and the habit of seeing all things with a poet's eye : at Bristol you have a good society, but not a man who knows anything of poetry. Dr. Beddoes's taste is very pessimism. Cottle only likes what his friends and himself write. Every person fancies himself competent to pronounce upon the merits of a poem, and yet no trade requires so long an apprenticeship, or involves the necessity of such multifarious knowledge. I want an equal reader to judge my poems, one whose knowledge and taste is commensurate with mine, who has thought as much upon the subject ; or else one who pretends not to criticise, but will surrender his feelings to me, and follow the impulse they receive.

I have been long idle, or rather lying fallow. After writing to you I walked to the Valley of Stones and to Ilfracombe. On my return, we remained a fortnight at Stowey, with Coleridge, where Edith gradually recovered, and where with walking and talking I was completely occupied ; we travelled together to Ottery St. Mary, and after vainly seeking lodgings on the coast, or in the villages near, I found lodgings on Monday last at Mr. Tucker's, Fore Street Hill, Exeter, whither direct. Coleridge is eleven miles distant, at his brother's ; he will pass some time here. We have formed the plan of a long poem to

execute in hexameters, but this you had better not mention, as it will need a strong preliminary attack to bully people out of their prejudices against innovations in metre: our story is Mohammed.

At Lymouth I saw Tobin's friend, Williams, who opened upon me with an account of the gaseous oxide. I had the advantage of him, having felt what he it seems had only seen. Lymouth, where he is fixed, is certainly the most beautiful place I have seen in England, so beautiful that all the after scenes come flat and uninteresting. The Valley of Stones is about half a mile distant, a strange and magnificent place, which ought to have filled the whole neighbourhood with traditions of giants, and devils, and magicians, but I could find none, not even a lie preserved. I know too little of natural history to hypothesize upon the cause of this valley; it appeared to me that nothing but water could have so defleshed and laid bare the bones of the earth—that any inundation which could have overtopped these heights must have deluged the kingdom; but the opposite hills are clothed with vegetable soil and verdure, therefore the cause must have been partial—a waterspout might have occasioned it perhaps—and there my conjectures rested, or rather took a new direction to the pre-Adamite kings, the fiends who married Diocletian's fifty daughters—their giant progeny, old Merlin and the builders of the Giant's Causeway.

For the next Anthology I project a poem on our Clifton rocks; the scenery is fresh in my sight, and these kind of poems derive a more interesting cast as *recollections* than as immediate pictures. Farewell.

Yours truly,

ROBERT SOUTHEY.

From the Same.

Saturday, August 3, 1799.

My dear Davy—We have been at Minchhead this last week, and I am still apprehensive that it will be the boundary of our journey. * * * *

This is a fine country ; it wants only an open sea, but the sight of the opposite shore flattens the prospects, and deprives them of that impressiveness which only immensity can occasion. As we advance, we are promised a very Paradise—woods, rocks, and a boundless sea—a country little known, and where no post-chaise can pass. What with carts and double horses, we shall get on if Edith be but better. Let me talk with you about Mango Capac. I wish I could interest you enough in the subject to induce you to undertake it, to look upon it as the business of your leisure hours—a relaxation from more important studies. Hitherto heroic poetry has been confined almost wholly to the triumph of animal courage—this would be the victory of intellect, the ascendancy of a strong mind over ignorance ; a difficult subject, but which may be made very striking. I have no maps to see the situation of the lake where Mango first appeared, with regard to its vicinity or distance from the sea ; of the lake itself I have found a description since my arrival here. It is very large, surrounding many islands ; more than ten rivers of some magnitude flow into it ; its waters discharge themselves through one channel, narrow and fathomless, unbridgeable from its depth, unpassable from its whirlpools : the Indians therefore floated a bridge over it, a net-work of twigs and reeds, fastened at either shore and buoyant upon the water. The people who inhabit the islands are a singular race—they say themselves they are not men, but something different from men, and I suppose superior, but this Acosta does not assert. Some of their tribes live wholly in their canoes, and shift about the lake at pleasure. On the shores of the lake, Mango and

his sister first appeared. I have given you a description, at length, of the place; it is very favourable for landscape poetry: if you admit the agency of higher beings than man into the poem, the legislators of Peru may as well be born there as anywhere else; if you do not, they must come from some country advanced in the intellectual progress. China is the nearest. I should, however, prefer Persia, and make them the children of one who adhered to the religion of Zoroaster when Mahometan intolerance had nearly extirpated it. There is a fine ground-work of poetry in the circumstance of a brother and sister marrying in the intimate union of feelings, opinions, and plans, which rendered them the only possible partners of each other. If you should think of this seriously, and undertake it, I will send you such circumstances respecting the country and its inhabitants as have fallen in my way in the course of my necessary reading; some things there are which would graft into the story.

If we were near enough to admit of daily intercourse, I should like to undertake the poem with you, because two people, if my opinion be not ill-founded, would necessarily write a better poem than one, their powers of poetry being granted and their similarity of opinion; the story should be the work of both, each take separate parts, each correct the other's and add to it whatever ideas occurred to him. When their styles had amalgamated, the work would have double the merit of the single production of either. It is singular that this should only have been done by Beaumont and Fletcher. Envy and vanity have probably prevented others from following it.

We shall remain here till Friday next. If you feel inclined to gratify me with a letter, there is time for its arrival; my direction is at Mrs. Alloway's, Minehead. I have seen nothing of Dr. Roget, and can hear nothing of him: you still, I suppose, go on working with your gaseous oxide, which, according to my notions of celestial enjoyment, must certainly

constitute the atmosphere of the highest of all possible heavens. I wish I was at the Pneumatic Institution, something to gratify my appetite for that delectable air, and something for the sake of seeing you. The Anthology must be nearly finished; the book will interest me much as the memento of many friends. You will receive a copy from Cottle, and it may serve to remind you sometimes of me, who would not willingly be forgotten by you.

Yours truly,

ROBERT SOUTHEY.

From the Same.

Burton, near Kingswood, Friday, October 18th, 1799.

Massena, Buonaparte, Switzerland, Italy, Holland, Egypt, all at once! the very spring-tide of fortune! It was a dose of gaseous oxide to me, whose powerful delight still endures. I was about writing to you when your letter reached me. Your researches into the science of nature and of man I shall look for with periodical eagerness, fully estimating the importance of researches which unfortunately I shall only be able imperfectly to understand. Science I have none, except in anatomy, knowing little but terms.

Thalaba the Destroyer, for so you must call the ci-devant destruction of the Dom Daniel, has been some time suspended. At Exeter, the advantage of a good library induced me to employ my time in laying in materials, a magazine of information, winter stores for the country where there is a dearth of books; so I travelled into Egypt, and the Levant, and Persia, and the East Indies, with every traveller whom I could find going that way—Fryer, Olearius, Mendelslo, De la Roque, the lying Lucas, Chardin the jeweller, who is worth them all, and who, plague on the Revolution of 1688, never published his last three volumes, so that I could only get at the first.

My employment was getting these for notes; information served as a leaven for invention, incidents were grafted upon local or national traits, and, like the bee, I have laid up my winter store of food. Since my arrival here, I have resumed the story, and am now rapidly advancing to the end of the fourth book.

In the Anthology also I have done something. Some songs characteristic of the different tribes of American Indians will form a division of some length; in the after volumes I shall continue the plan, and go through the different nations whose customs and superstitions seem fit for poetry. I purpose a poem of some length on our rocks at the Hot Wells, in that calm and elevated blank verse which, when I have written, has excited in me stronger emotions than any other species of composition: here I shall affix my name. Thank Tobin¹ for his intended communications in my name: I shall be glad to receive them. His Soldier Ghost is a fine poem; if he does not intend to print it, I should be much gratified by having a copy.

I am revolutionizing here, organizing two beggarly cottages into one dwelling-house; in the course of a fortnight we shall have a comfortable habitation to enter, small, but big enough to hold us and any friend who may think it worth while to visit us. There is a garden quite large enough, and quite empty, so that I may follow my own taste in filling it; the ground is very good, and has long been fattening in fallowness. Here I mean to take much of my necessary quantum of exercise.

The Brutus of your plan I suppose to be the fabulous settler of Britain. You will find Pope's sketch on this subject in Ruffhead's life of Pope. There is little merit or originality in it from its utter obscurity: the story is good, and it suits a

¹ John Tobin, author of the "Honeymoon," a play acted in 1805, the year after his death. The Prologue to it was written by my brother.

Cornish man from the rank Corinæus must necessarily hold. Perhaps I mistake you here, however, and you may have chosen the more elevated and republican theme of Rome delivered, and the expulsion of the Tarquins, a difficult and mighty subject.¹ Mango Capac lies among my after plans, a solitary germ fermenting in some recess of my brain, one day by development and accretion to assume a mature shape and size. The history is so unaccountable, that I can form no hypothesis probable enough for poetry.

Will you be good enough to send me some fox-glove for my mother, and likewise some of the asthma drops that she may take when her cough is removed? Danvers will convey them to me. I shall not visit Bristol till I come to superintend the printing of *Thalaba*, which must first be written. In the spring, however, this will bring me there, and I shall work, perhaps, with more eager industry, that I may the sooner see the old city where I have ever had some person to remember with affection.

Edith is tolerable, and desires to be remembered to you; my brother, whom you once saw, is a prisoner at Ferrol, and we are anxiously waiting to hear from him.

God bless you! Yours truly,

ROBERT SOUTHEY.

From the Same.

Burton, near Kingswood, Tuesday, November 12, 1799.

My dear Friend—The immediate occasion of my writing is to request that, if a Mr. Elliott visits you at the Pneumatic

¹ The first conjecture was the right one. In a note-book kept at Clifton is a sketch of the poem, its scenes, incidents, and characters, mainly after Geoffroy of Monmouth, or Milton his follower, who in repeating the reputed tales of our early history, says—"I have determined to bestow the telling of them, be it for nothing else but in favour of our English poets and rhetoricians, who by their art will know how to use them judiciously."—*History of Britain*, p. 1.

Institution, you will have the goodness (unless from his state of health you should deem it hurtful) to beatify him with a dose of the gaseous oxide. I do not myself know Mr. Elliott, but write at the desire of my particular friend here, Rickman,¹ to whom, if you should ever find leisure to visit me here, I should be gratified by introducing you as to a man of the most various knowledge I have ever known.

I write in much weakness of mind as well as body: something ails me at heart. I have, except the first few morning hours, a settled, dull, obtuse aching there, as if a rib against which it prest were bruised. For a fortnight this has been the case, and within the last five days a diarrhœa, with consequent fever and sleeplessness, has reduced me to an almost palsied debility. Of course all enjoyment and all employment have of necessity been suspended.

From William Taylor, the all-knowing, I learn that the few Peruvian words preserved by Garcilasso the historian (himself son of a Peruvian mother), are Malay, and that in that tongue Mango Capac signifies a man with an axe; sufficient proof of an Eastern origin, which I always believed the most probable. With the view to collect more materials for this subject, I have lately from the Zend-Avesta and other labours of Auquetil du Perron, made myself acquainted with the religious system of Zoroaster, a system the more fit for poetry, because the obscurity lies only in the parts, while the great outline is distinct: in this completely differing from the unconnected and unsystematizable fables of Hindoo absurdity. In time, the heap of matter may ferment into form and life, but now my head is only susceptible of aching and fever, and all nervous feelings of pain and agitation. To-night I try if

¹ For many years one of the clerks in the House of Commons, distinguished for his exact and varied knowledge, especially in statistics. He officially conducted the first census, that of 1800. He died in 1840, August 11th. He was a man of a vigorous mind in a robust body. I remember well his appearance in 1808-9.

opiates will send me to sleep, and when I sleep, preserve me from broken yet connected dreams, more fatiguing than wakefulness. I often wish myself at Bristol, and if, as I have more and more reason to apprehend, a constitution debilitated by the worst possible management in childhood, the most ruinous system of coercion from all things proper, should for ever incapacitate me from the labour and confinement of professional studies, why, I shall probably look to Bristol as my haven: 'tis the place where I have ever felt myself at home, where I have, when absent myself, remembered my dearest friends, where I could walk confidently in darkness through every winding. I have experienced more pain and pleasure there than elsewhere, and these things twist into a strong cord of attachment.

God bless you! Excuse a half letter from a sick man. At all times I should be glad to give you my hand, but now I should be glad to offer you my pulse, that I might have faith and be cured. Here the people would poison me if I sent for the commonest drug.

Yours affectionately,

ROBERT SOUTHEY.

From the Same.

Cintra, July 26, 1800.

I had the good luck as a poet, and the misfortune as a man, to feel the nightmare last night. The night was very hot; I had been extremely restless for many hours; the intelligence that my cousin Margaret was in a decline, had reached me in the morning, and prevented me from sleeping. A sort of delirious activity at last seemed to possess my imagination, and I remember combining in words that the mind heard the most incongruous associations of monstrous thought, involuntarily. I was in a separate bed, lying on my back, my legs and arms

stretched out asunder, the right hand fearing to touch the left on account of the heat. I recollect my last definite feeling was as though I had been stretched on a wheel that raised up my breast, and strained my extremities. After that, I had forgotten myself, and the seizure came on: it was a weight on the breast. I thought some evil being was trying to destroy me. I attempted to move, but I saw some other legs than my own coming from the bed, as if mocking me. I thought I was awake; this was the most singular circumstance. I knew where I was; I knew it was the nightmare. I knew one word, one motion would relieve me, yet it appeared that my eyes were open, that I saw a red fire suspended in the middle of the room, that some evil being had caught me; there was a lamp burning on the table; the oppression brought on the same head seizure to which I was subject in England, and then with great difficulty I at last made a feeble noise, but enough to awaken Edith; she called to me, and the charm was broken. I do not wonder at the old superstition, for nothing can so strongly impress the belief of an evil agency. You have an accurate account of what my feelings were, and given while the recollection is still vivid.

You request a particular account of the effect, the change of climate, &c., has produced upon me. I slept so well on my arrival, that I made no use of the laudanum which Pitcairn prescribed. As to diet, I have drank more wine, and it is likewise probable that eating much fruit, by assisting digestion, may have had some beneficial effects; but assuredly the total change of external objects and the climate must have been the great causes. My spirits have been uniformly high, and the bodily anxiety which threatened very badly in England gone.

Volta's experiment is important. It should appear as the galvanic fluid stimulates to motion, that it is the same as the nervous fluid; and your system will prove true at last. Has

it yet been tried whether the electrical shock will produce the same motion in frogs as the galvanic fluid ?

* * * *

I tremble for Alfred¹—those long speeches ! and, if reviewed by a hostile, or even an indifferent hand. Had he listened to me, cut out his dialogues, and introduced machinery, he would have done well. Angel and devil nature he could have known as much about as his neighbour, but of human feelings he knows nothing, and might as well write an account of the moon, and a history of the man in it. I shall expect it with your book the next voyage that Yescombe makes, that is, about a month from this time.

Thalaba is finished, and my employment is now correcting and copying it for the press, my resolution being to send it over for publication. I have new plans of poetry, but it is impossible to build without materials, and the books needful are in England. I design a romance founded upon the creed of Zoroaster, the scene of course in Persia ; the leading character one of the sons of a great king, persecuted by the evil powers, but every evil that they inflict develops in him some virtue which his situation had smothered. A Greek slave is a prominent character, and the conclusion is, that the Persian prince is exalted into a citizen of Athens. Here is an opportunity of seasoning the dish to my taste—no further has the story got. For another and more serious poem, I design the establishment of the Inquisition to serve as subject ; St. Dominic (more properly Domingo) the hero, a man indulging the blackest feelings of malignity and cruelty, and believing them religious virtues. You may smile, but by writing two poems at once I expect to save time, because I may write a book of one, while the story for a book of the other matures, and thus not pause so long between the books of each as would be necessary to let the seeds ripen ; these, however, are to be.

¹ "An Epic poem," so called, by Cottle.

written in England. What I bring home will be labours of another cast.

In the history of Portugal, I shall be likely to have a complete and finished subject. The country is in a decline, and cannot recover. Beyond this it is not easy to speculate. Spain is weak and tottering, and nearer the edge of the precipice, but both must inevitably fall, I trust, to rise again in a better shape. I have collected much miscellaneous matter relative to this place; so much, indeed, that my chief reason for sending over *Thalaba* for publication, will be to make room and leisure for other publications on my return.

Coleridge's translation is admirable; but Coleridge, who can write as well as Schiller, ought not to have translated. He has done wrong, I think, in removing so far from his other friends, and wholly giving himself to Wordsworth; it is wrong on his own account, and more so on his wife's, who is now at an unreachable distance from all her sisters. What of the life of Lessing? the essay on the "Genius of Schiller" amused me, it is not the first nor the second time that he had advertised what has not been written. Remember me to Tobin;¹ he will ask what is the use of *Thalaba*, and condemn me with all a metaphysician's apathy. I know he must detest the hexameters, and suspect my metre will not come off much better, but his ears are not much better than his eyes, God bless him! I know no one more zealous in a good cause.

I am induced to think with the Portuguese, that consumption is an infectious disorder, by what has been told me here; if it really be so, its frequency in England may be ascribed to the prevalence of the contrary opinion. You will know where there is any possible means of ascertaining it, by examining the breath given out by patients whose lungs are decidedly affected. I see the author of *Gebir* has been translating from the Arabic and Persian. Can there possibly be Arabic and

¹ James Tobin, the brother of the dramatist.

Persian poetry which the author of Gebir may be excused for translating? God bless you!

Yours affectionately,

R. S.

From the Same.

If you have not seen Danvers on your way to town, you will be surprised to receive a letter from me, dated at Dublin: the wind of fortune has shifted and driven me here. I came by Rickman's invitation to a berth somewhat similar to his own, in which capacity in a very few weeks I shall remove to London, and be your neighbour once again. In June, I shall return here, and Rickman wants me to bring you over in your leisure. The Government here have purchased the first collection of minerals in the world, the Leskean collection; this is one bait. Of the chemistry here, he sends a specimen herewith. Here is a noble city, an odd people, and the map promises glorious lakes and mountains, things which, in spite of Tobin, I never will believe you can cease to love as devoutly as I love them.

It is since we parted at Bristol that I read the Gowrie; and, indeed, after what you had said, I read it with astonishment. You had praised it, and your praise passed current with me, perhaps because I had received so much of it myself, but still more because, on other subjects, I had never heard it ill bestowed. The Gowrie I thought very, very bad; there were imitations from all writers, a leading dash from the Gebir running through the whole. No character, no feeling, no truth of nature, metaphor heaped upon metaphor, an eternal reasoning, soliloquising, conversations about nothing. Rough promised much when a schoolboy, but I am satisfied that he never will perform anything great. His book was feeble, and this is turgid, the palsy, and the dropsy; he has not a healthy genius.

I now remember who the author of Gebir is : he was a contemporary of mine at Oxford, of Trinity, and notorious as a mad Jacobin ; his Jacobinism would have made me seek his acquaintance, but for his madness ; he was obliged to leave the University for shooting at one of the Fellows through the window ; all this I immediately recollected on getting at his name. How could you compare this man's book with Rough's ? The lucid passages of Gebir are all palpable to the eye ; they are the master touches of a painter—there is power in them, and passion, and thought, and knowledge.

I was travelling in Wales, the country of Madoc, when Rickman summoned me hither. Upon that poem I meant to have employed myself, and to have laboured at it, completely recasting the metal. Now, I know little what leisure will be left me, but there is no reason to fear unremitting task-work. In common prudence, the offer could not be refused, and there were also feelings of a higher order which left me no choice. What I have heard of the rulers here is very favourable ; they are encouragers of science and literature, laborious in removing old grievances, charming away the old corruption, and anxious to improve the country and the people.

Direct to me, if in the course of a week you can find leisure to write, *under cover* to “ Right Hon. Isaac Corry, &c., &c., Dublin.”

I give you the address in its due form. Your handwriting, Davy, I shall be glad to see, still more so to see you when I reach London. Times have changed since we first became intimate, and we also must be changed, you probably more than me, for mine are older and riper habits. I do not love to think of this ; the world cannot mend the young man whom I knew before the world knew him, in the very spring and blossom of his genius and goodness.

God bless you, Davy !

ROBERT SOUTHEY.

In this last letter a singular mention is made of a distinguished author, Mr. Walter Savage Landor, and in so precise a manner, as almost to preclude doubt as to the accuracy of the statement, and yet I rejoice to be able to say that it is founded in error. It will amuse the reader, and I am sure gratify him, to have the account in Mr. Landor's own words, which he has granted me permission to give, on my bringing that part of Southey's letter under his notice. The account is contained in the following letter, in reply to mine:

Sir—My usual fire of laughter burst forth on reading your letter. The fire across the quadrangle was hardly louder or hardly more inoffensive. The fact is this: In the morning I had been rabbit shooting: in the evening I had an after-dinner party. My gun was lying in the bed-room; one of my guests proposed to fire it at a closed window-shutter opposite—the room was a man's with whom I never had a quarrel or spoken a word. Fleetwood Parkhurst was the only one in my college with whom I had any intimacy. The rest of the company was mostly of Christchurch. I should not have been rusticated for two terms unless the action had been during prayers. Kett, who afterwards hanged himself, and thereby proved for the first time his honesty and justice, told the President, Chapman, that he was too lenient. The President had said: "*Mr. Landor, it is the opinion of the Fellows that you be rusticated for two terms, at the expiration of which I invite you to return.*" Kett had the impudence to tell him "such a formulary was unexampled." I requested that my punishment might be of any other kind, however much severer, as it would pain my family, not me. Dear, good Benwell, my tutor, shed tears. That I was republican is certain—so I am still—but never Jacobinical after the death of the queen. In

fact, I then began to hate the French, which also I do still. My time at Oxford was occupied in intense study, and my rabbit-shooting was only once—I oftener stuck in the middle of a Greek verse than of a brake—and, though I wrote better Latin ones than any undergraduate, or graduate, in the University, I could never be persuaded, by any tutor or friends, to contend for any prize whatever. I showed my compositions to Birch of Magdalen, my old friend at Rugby, and to Carey, translator of Dante ; to none else.

Southey did not find me quite so mad as he expected, when he visited me at Clifton, the first or second year (I think) of this century. Virtue, wisdom, and genius, he united in a higher degree, and more interfused, than any other creature I have known. His friendship is the main glory of my life. You may write all this about him and

WALTER LANDOR.

The difficulty of arriving at truth is notorious! What Southey states respecting Mr. Landor's conduct at college is a striking example of the truism. I wish I could include in the remark Mr. Landor's account of Mr. Kett's death; yet it is an example, I believe, in a less degree; for I have learnt on good authority on inquiry made after receiving Mr. Landor's letter, that he did not hang himself;—to use the words of my informant, “he was found drowned, and there was no evidence to show how he was drowned; but his friends believed that he destroyed himself from some expression he had been heard to use, and from his being known to have been in a state of extreme depression of spirits.” And, it may be added, not without reason, as some of his publica-

tions were considered a discredit to his University, and had been severely criticised on that account.

The letters of Coleridge, those addressed to my brother at Clifton, I shall reserve for the next chapter, so as not to break the continuity of the series and separate them from those written to him after taking up his residence in London.

The following letter from the venerable and veteran Priestley,¹ written from America, where he had sought and found a quiet asylum from the persecutions which he had so unjustly experienced at home, was much valued by my brother, and can never be read without exciting an interest, both on account of the individual character of the man, the then state of the science of chemistry, and even the state of the country in which he had taken up his abode—the science and the country so changed in little more than half a century.

From Dr. Priestley.

Northumberland [U. S.], October 31, 1801.

Sir—I have read with admiration your excellent publications, and have received much instruction from them. It gives me peculiar satisfaction, that as I am now far advanced in life, and cannot expect to do much more, I shall leave so able a fellow-labourer of my own country in the great field of experimental philosophy. As old an experimenter as I am,

¹ Born in 1733, he died in 1804. His great discovery was that of oxygen gas; and next to that, the antagonistic part performed by vegetables in their growth under the influence of the sun's rays, in decomposing carbonic acid, and whilst assimilating the carbon liberating the oxygen, thereby securing the salubrious composition of the atmosphere in danger of being vitiated by the respiration of animals.

I was near forty before I made any experiments on the subject of *air*, and then without, in a manner, any previous knowledge of chemistry. This I picked up as I could, and as I found occasion for it, from books. I was also without apparatus, and laboured under many other disadvantages. But my unexpected success induced the friends of science to assist me, and then I wanted for nothing. I rejoice that you are so young a man, and perceiving the ardour with which you begin your career, I have no doubt of your success. My son, for whom you express a friendship, and which he warmly returns, encourages me to think that it may not be disagreeable to you to give me information occasionally of what is passing in the philosophical world now that I am at so great a distance from it, and yet interested, as you may suppose, in what is passing in it. Indeed, I shall take it as a great favour. But you must not expect anything in return. I am here perfectly insulated, and this country furnishes but few fellow-labourers, and these are so scattered that we can have but little communication with each other; and they are equally in want of information with myself. Unfortunately our correspondence with England is very slow and uncertain, and with France we have not, as yet, any intercourse at all, though we hope to have it soon.

As Dr. Nicholson was so obliging as to give a place in his Journal to the account that I sent him of my experiments on the freezing of water, I have sent him two other articles, one containing experiments with the pile of Volta, to which I sent a PS. by my friend, Mr. Lindsey, in Essex Street, and another in reply to Mr. Cruikshank's observations on finery cinder. I also sent him a copy of several articles that are printed for the fifth volume of the Philosophical Transactions of Philadelphia, which are not yet published. The more important of these I hope he will insert in his Journal. In some of them you will find an account of facts of an extraordinary nature, such as I am far from being able to account for. I

wish you would give some attention to them, especially to the transmission of air through some air-tight vessels and bladders, and the total absorption of air after long standing in water. I see in the "Annales de Chimie," that Dr. Guyton has considered the former of these in the Encyclopédie, but I have not that work. You can see it and tell me what he says of it.

I thank you for the favourable mention you so frequently make of my experiments, and have only to remark, that in Dr. Nicholson's Journal you say that the conducting power of charcoal was first observed by those who made experiments on the pile of Volta, whereas it was one of the earliest I made and gave an account of in my history of electricity and in the Philosophical Transactions. And in your excellent Treatise on the Nitrous Oxide, p. 90, you say, and justly, that I concluded the air to be lighter than that of the atmosphere. This, however, was an error in the printing that I cannot account for. It should have been *alkaline air*, as you will see the experiment necessarily requires. With the greatest esteem, I am, Sir,

Yours sincerely,

J. PRIESTLEY.

The following few extracts are from note-books kept about this time, certainly not later. They relate chiefly to physiology, which then, more than ever after, had my brother's special attention in connexion with his professional pursuits and his medical duties in the Pneumatic Institution under his care:

"Consistency in regard to opinions is the slow poison of intellectual life, the destroyer of its vividness and energy."

"The use of physical science is, that it gives definite ideas."

“Great discoveries may sometimes be made by chance, but they are much oftener produced by laborious and accurate investigations.”

“Another evil has originated from favourite hypotheses, viz., experiments mutilated and not to be relied upon. He who is governed by preconceived opinions, may be considered as a person viewing objects through coloured glasses, each object assuming a tinge similar to that of the glass employed.”

“The only way in which we can hope to make any progress in chemical philosophy is by accurate experiments.”

“All our attempts to reason upon the phenomena of life will be impotent till we are acquainted with the composition of the substances by the assimilation of which, and new arrangements in living beings, these are produced.

“Hence the knowledge of sublime chemistry, or the classification of the attractions in corpuscular motions producing the phenomena of the external world, will not be most interesting to man as enlarging his ideas and giving grandeur to his conceptions, and providing for many of his wants, but as opening the field for discoveries still more important and sublime—the knowledge of the laws of his own existence.”

“The dependence of life upon the perpetual assimilation of new principles with the blood—the necessity of supposing that some change must take place in the nervous and muscular fibre during sensitive and irritative action, compared with the changes effected in nutritive matter during its animation, assimilation, render it probable that the phenomena of life are capable of chemical solution. But this supposition, instead of inducing us to form crude and hasty theories concerning the specific nature of those changes and the principles producing them, ought to induce us to carry on laborious and accurate investigations with a view of ascertaining them.”

“The discovery of the absorption of oxygen gas in respiration, and the dependence of life on this absorption, formed a new era in physiological science. From this time, chemistry,

which had been almost exclusively employed for the purposes of the arts, or for the solution of certain physical phenomena, became connected with life. But before accurate chemical investigations had determined the changes effected in the blood by this principle of life, theories were formed referring all living action to its combination and decomposition. The number of theories formed have been very great in proportion to the number of facts discovered."

In a note-book kept at this time, there is a passage, a rhapsody, which I am tempted to transcribe, as a foreshadowing, as it seems to me, of the feelings which he had, and which he in part expressed towards the close of life—indeed, when he considered himself dying. The passage is from a fragment of a romance, a portion of the conversation of two friends.

The dying one speaks:—

"Behold me on the couch of death—my senses failing, my organs falling towards that state in which they will resolve into their primitive atoms. Still is my mind unconquered; still all my energies are alive, all my trains of thinking complete. Philosophy has warmed me through life; on the bed of death she does not desert her disciple. The frost of the grave can never chill those burning energies connected with the thoughts of a future existence. I feel and believe that the genial warmth of the sun of immortality which has shone through this shattered frame with feeble light, shall be more permanent in the regions of bliss. I feel within me new energies. These hopes do not announce pain or annihilation. O, happy man! O, benevolent Deity! Thou art everywhere existing, and where thy pure essence is interfused, pain cannot be permanent."

CHAPTER III.

FROM HIS LEAVING CLIFTON FOR LONDON IN 1801 TO
1807, THE YEAR OF HIS DISCOVERY OF THE BASIS OF
THE FIXED ALKALIES.

ON his leaving Clifton and the Pneumatic Institution for London, and becoming Professor of Chemistry at the Royal Institution, he may truly be said to have entered on a new and enlarged sphere of existence. All the circumstances were again most favourable to the exertion of his powers and to his full mental development; a laboratory at his command most amply provided with the means for experimental research, a model of its kind; a theatre capable of holding an audience sufficiently large to call forth his abilities as a lecturer, and what perhaps was even more important, that audience one of more than common intelligence and refinement, being composed chiefly of persons of rank of both sexes and of literary men and men of science, altogether in its composite nature singularly fitted on one hand to excite eloquence, on the other hand to keep it within just bounds and prevent its passing into empty declamation; and thus preserving the poetry of the subject in subordination to its science.

Another advantage he had, and that not an incon-

siderable one, of being associated, or brought in contact at the Royal Institution, and soon after at the Royal Society when he became one of its secretaries, with men of the first eminence in science and literature, such as Young, Wollaston, Cavendish, Herschell, Dalton, Smith, and others; many of whom became his intimate friends, for instance, Mr. Thomas Andrew Knight, Messrs. Children, Warburton, Greenough, Allen and Pepys, &c.

On his success as a lecturer, which was eminent, I need not dwell. The theatre, with its gallery capable of holding a thousand persons, was generally crowded when he appeared there, and with a varied assemblage such as has been just described, exhibiting in its crowded state a remarkable contrast to the thin ranks on its benches when attending the discourses of men less popular, however eminent, such as Young and Dalton, men better qualified by their accurate and profound knowledge to instruct than to please. Some examples of his style of lecturing will be found in the eighth volume of his collected works. The specimen which follows, so far as a single passage allows, may aid in giving some idea of his popular manner to those who have not those works to consult; it is the concluding portion of a lecture on electro-chemical science delivered on the 12th March, 1808, in which, after Bacon, he vindicates the benefits to mankind of experimental science and natural knowledge in general, against the *cui bono* carpers.

“ In this advanced age of the world there ought to be no question concerning the importance of natural knowledge, of discoveries of the powers of nature, and of the wise laws by which they are governed.

“ It does, however, sometimes occur that the inquiry is made, Of what use is this knowledge? Of what use is that discovery? and the word *use* employed in this way, always means some vulgar or immediate application, something connected with our common wants.

“ I do not mean to insinuate that even this kind of use should be neglected in research; and indeed it has generally happened that great philosophical discoveries have been accompanied by noble practical and popular applications, I mean merely to argue against too great an extension of the feeling, against an extension of it which makes truth, and wisdom, and knowledge of no importance for their own sakes.

“ If there be anything dignified, or noble, or worthy of estimation belonging to humanity, anything superior to the common sentiment of self-love, it appears in those faculties by which we endeavour to exalt and sublime our intellectual nature and to gain a dominion over the senses; and, after sacred and moral duties, there is no pursuit more worthy of attention than that which unfolds to us the infinitely wise and wonderful mechanism of nature, and which produces benefits from the hidden properties of things, ordained in their diversified relations for the pleasure and advantage of man.

“ If an objection be made to any of the truths of experimental science from their want of popular application, how much more will such reasoning apply to letters in general, to poetry and the fine arts and those things which ornament and dignify social life. Yet, in this case it would be more generally found ridiculous, because the taste for them is more diffused and more fashionable; and were any one to ask what has been the use of a sublime poem, or of a beautiful picture or statue, he would not be thought deserving of an answer.

“ Human beings have been created for happiness, and a principal means of obtaining it is by the exercise of the intellectual faculties, by an exertion of reason and imagination, by imitating nature and modifying her operations. And knowledge is no less necessary to supply the wants of the mind than food is to support the functions of the body.

“ If we argue against any species of true improvement, we argue for the uncultivated against the civilized condition, for who shall assign the limits where utility begins and ends? The savage would consider as useful only what procured food and shelter. The civilized man extends the term to the comforts, refinements, and luxuries of life. By the enlightened mind all these are considered as of importance, but he will place the sources of intellectual pleasure above them all.

“ The defence of the sciences has been so admirably executed by the same great mind which in modern times fixed their foundations, that I cannot avoid giving a few sentences from his works, on the subject.

“ ‘ The introduction of noble discoveries,’ says our author, ‘ seems to hold by far the most excellent place among all human actions ; and this was the judgment of antiquity which attributed *divine* honours to inventors, but conferred only *heroical* honours on those who deserved well of their country in civil affairs. And whoever rightly considers, will find this a judicious custom, for the merits of civil benefits are confined within the circle of an age or nation ; and are like a fruitful shower, which though profitable and good serves only for a season and fertilizes a single spot. But discoveries are like blessings of heaven, permanent and universal, applying to all ages and all conditions of society. And to leave the vulgar arguments that by knowledge man excelleth man in that in which man excelleth beasts, that by learning man ascendeth to the heavens and their motions, where in body he cannot come, and the like, let us consider the dignity and excellence of knowledge in that to which human nature most aspires,

which is immortality or continuance. For to this tends the raising of houses and families; to this buildings, foundations and monuments, and the desire of memory, fame and celebration. But the monuments of invention and learning are far more durable than the monuments of power or the work of the most skilful hands; for the first decay, and are injured or destroyed; but the last remain and are perpetuated by letters, exempted from the wrongs of time, or capable of perfect renovation.'

"In this eulogium the illustrious author has alluded to knowledge and invention in general; but it may be particularly said of discoveries in experimental philosophy that they cannot but produce benefits, and can by no means be turned to evil or unworthy purposes. Literature and the fine arts, though most noble in their general efforts, may be misapplied; natural science, on the contrary, being an exhibition of the powers existing in the universe of things, cannot be subservient to the passions, prejudices, or vices of men. As far as it influences, it must correct evil tendencies, and having a sublime origin in philosophical minds it descends even to the most familiar offices and is subservient to common purposes. Like a stream rising amongst mountains, it flows from the heavens to the earth, and though in its beginnings it is known only to a few, its benefits gradually spread and at length it adorns and fertilizes an extensive and populous district."

Of his labours in the laboratory in the way of original research, and it was to these he most devoted himself, I must here advert very briefly. The subjects to which he first directed his attention were branches of chemistry connected with the useful arts, and besides these, the infant science of galvanism or voltaic electricity. Of the former, as

chief, may be mentioned tanning and agriculture, both at that time, so far as principles were concerned, but little understood. The results of his inquiries on tanning were given in a paper communicated to the Royal Society, and those respecting agriculture in lectures (afterwards published) delivered before the Board of Agriculture. Voltaic electricity, however, in connexion with chemistry and as a new power of chemical analysis, was his great subject, and as discussed in his Bakerian Lectures, earned him a European reputation. It was for his discoveries in this new science that the Napoleon prize was awarded him, and it was by the application of this power, which he was chiefly instrumental in bringing into action, that he succeeded in decomposing the fixed alkalies; a discovery by which a new era in the history of chemistry was opened, and a revolution in chemical science effected hardly less remarkable than that which had been accomplished by the genius of Lavoisier, availing himself of the labours of Black, Cavendish, and Priestley.

This was to him again a happy period; intensely occupied, enjoying society as only a young man can enjoy it, and when his duties did not confine him to London, at liberty to indulge his taste for travel in home tours, the war then hindering any other. These he extended to the wilder parts of Scotland, Ireland, and Wales—excursions in which science and sport were mingled, especially geology and angling. Of his attention to the former, the Museum of the Royal Institution bears witness in the numerous

specimens of rocks and minerals contributed by him, and chiefly collected during these his vacations.

That he was, however, exposed to dangers of no common kind at this time, and so long as he lectured at the Royal Institution, is unquestionable, particularly in a way that even the strongest minds cannot always resist—I refer to praise and admiration. I have read copies of verses addressed to him then, strongly bearing out the remark—anonymous effusions, some of them displaying much poetical taste as well as fervour of writing, and all showing the influence which his appearance and manner had on the more susceptible of his audience.

An apprehension, too, was entertained by some, and it may be inferred was made known to him by one of his friends—one whose friendship endured to the last—that the society he mixed in in London, the gay and fashionable, might exercise on him an injurious influence. Thinking the fear groundless, he did not resent the expression of it, but repelled it with the assurance that his *real*, his *waking* existence was among the objects of scientific research, and that common amusements and enjoyments were only his diversions. The letter in which he thus expresses himself will be found in the Memoirs of his Life, and sure I am that he believed what he wrote, and that the friend to whom he addressed it, the same who had acquainted him with the apprehension, the late Mr. Poole, believed it, and that with an enduring faith, or he could not have expressed himself as he did in a letter I had from him after my

brother's death, to this effect, that "The more his *whole being* is known, the more the *man* will be esteemed and loved, the more the philosopher thanked and venerated." I shall have occasion to revert to this subject hereafter.

Of the letters which I have obtained relating to this period of my brother's life, the first I shall give are those addressed by him to an early friend and fellow-labourer, a physiologist, the late Mr. King of Bristol, a Swiss by birth,¹ for which I am indebted to the kindness of his daughter, Miss Zoe King. These were written shortly after his leaving Clifton, either the same year, or the following, as may be

¹ Southey, in one of his early letters, thus speaks of this gentleman and of my brother, when writing of his Bristol friends:—"The little that I saw of King much pleased me, but Humphry Davy (he had then left for London) is an unreplaceable companion."¹ The following epitaph on the plain stone over Mr. King's grave in the Arno's Vale Cemetery, is from the pen of a no flatterer, that of Mr. Walter Savage Landor:—

Having acquired an extensive knowledge,
Especially in the diseases to which the human frame is liable,
Negligent of fortune,
Assiduous in solacing the poor,
Beloved by family and kindred,
Honoured by friends and neighbours,
Sought and consulted by strangers,
And now called to receive his reward by Him whose minister he was,
Here rests from his labours,
Amidst the benedictions of them all,

JOHN KING.

He was born at Berne, in Switzerland,
Of which city he was a Patrician.
He practised as a Surgeon, at Clifton, almost 50 years,
And died there on the 18th day of August, 1846,
Aged 80.

¹ Selections from the Letters of Robert Southey, vol. i., p. 153.

inferred from their contents, and their enthusiastic, wild, and youthful tone of expression and sentiment; a prevailing and pervading tone at that time, as shown in the writings of those with whom my brother was most associated, especially Coleridge.

To J. King, Esq., Pneumatic Institution, Hot Wells.

Dear King—Nature is beautiful, and you are in her bosom. That the voice of comfort which speaks in the breezes of morning, may visit your mind, that the delightful influences which the green leaves, the blue sky, the moonbeams and the clouds of the evening diffuse over the universe, may in their powers of soul-healing, visit your day visions, is my desire and hope.

You were long silent, and I have been long, long silent. The voice of fame is still murmuring in my ears; my mind has been excited by the unexpected plaudits of the multitude. I dream of greatness and utility. I dream of science restoring to nature what luxury, what civilization have stolen from her.

My labours are finished for the season as to public experimenting and enunciation. My last lecture was on Saturday evening. Nearly 500 persons attended, and amongst other philosophers, your countryman, Professor Pictet.¹ There was respiration, nitrous oxide, and unbounded applause—Amen. To-morrow a party of philosophers meet at the Institution, to inhale the joy-inspiring gas. It has produced a great sensation—ça ira.

Dr. Garnet has resigned, and at this moment I am the only lecturer. Before he resigned, I was made sole lecturer on chemistry. I have been nobly treated by the managers. God bless us! I am about 1,000,000 times as much a being of my own volition as at Bristol. My time is even too much at my own disposal. So much for egotism, for weak, glorious, pitiful, sublime, conceited egotism.

* * * *

¹ Close to Professor Pictet's grave is my brother's at Geneva.

The next week's post will bring my concentrated thoughts to Clifton. Apologise to that most excellent being, Danvers, that I have not written to him. He is one of the men who have engrafted the love of human nature in my soul. * * *

I am, your sincere friend,

Κολποφίλος.

To the Same.

My dear King—It was with unfeigned pleasure that I heard from Tobin of the quiet and pleasant state of your feelings. The mind is a very powerful being; nurtured by hope, it is capable of conceiving great things, and of effecting good things. I expect much from your application to the ever varying physical phenomena of life. You have been accustomed to observe minute dependencies of things on each other. In organised nature everything is minute: nothing can be done by rapid generalizations of aspiring genius, which makes use of no instruments but words. But all things are effected by laborious, by patient investigation, by the mechanical but important material apparatus of hands and eyes.

I very often look back with pleasure to the time when we laboured together; when we had analogous hopes and fears. Time has passed away: the present is very unlike the past; and, in judging of futurity, we seize the nearest analogies. Hence you think of me but seldom, for you are surrounded by the same objects, and acted on by the same beings, as when I first knew you, and my identity, as part of the whole existing in your mind, has gradually been lost by mingling with myriads of ideas of objects with which I was formerly individually connected. But I think of you often, and my heart often yearns towards the old ideas of Clifton, the Hot Wells, and the moral and natural beings that beautify them, *for* I am in *London*, connected with new scenes and new beings, by which the old scenes and beings can never be modified. Our existence is a round of varied feelings, in which nothing

is permanent, and in which peculiar habits of acting and thinking succeed in turns, awakened into life by novel incidents. The season that I passed in the country was one of mental reaction ; new ambitions had produced new hopes and fears. It was necessary that these hopes and fears in my mind should merge into confidence. I am now (pardon my egotism) a new being. I have feelings, deep, moral feelings, saying, "remember your friends." They are connected with vivid dreams of hope, with thoughts of joy in *their* happiness.

I shall expect to hear from you. How I should rejoice to hear that Mrs. Beddoes might be called by the sacred name of mother ! how delightful a thing it would be to see that woman of genius, of feeling, of candour, of idleness, of caprice, nursing and instructing an infant, and losing in one deep sympathy many trifling hopes and fears.

I send by Tobin a paper for you or for the Doctor, for whichever will take the trouble to read it. I have made some new discoveries in galvanism. Remember me with affection to Danvers. I sat down to write you a note, and I have written a long letter.

Farewell !

H. DAVY.

To the Same.

Bala, North Wales, September 1.

My dear King—I shall feel much obliged if you will give house-room to two boxes directed to you at Bristol, and sent by the Derbyshire Canal. They contain my clothes and those of my friend Purkis ; and we hope to find them safe on our return through the Wells.

I have been for the last five weeks enjoying myself in the country ; and you can easily understand that my old acquaintances, the woods, and rocks, and rivers, have appeared more interesting to me after a residence of eight months in London. The valleys of Derbyshire are in the highest degree beautiful,

and something in the character of the vales of the Avon and Wye, though as I think superior to them in fine and grand features ; and though they confine the imagination, even after a month I was delighted with them.

North Wales has given me conceptions that I never had before of the great and sublime in nature. A mountainous country is a fairy land in which new beauties rise with every change of scene, and in which fancy is never satisfied.

Cannot I tempt you to come and spend two or three days with us amongst the hills ? We purpose to be at Harford, the Devil's Bridge, in about a week, and if you would meet us, it would give me a very high gratification. Did you not talk of forming a party with Southey and Danvers ? If I thought I should meet those "Worthies of the elder times" in the country of the ancient Britons, it would be a source of hope to me and of cheering throughout my journey.

Tobin is gone to Liverpool full of the love of the beautiful ; and, if I mistake not, two damsels, daughters of a much lamented philosopher, have ere this softened the hard heart of the moralist of the human race.

I do not remember you in my prayers, but I remember you when I am enraptured with the great and the fair, for you are in my dreams of Tintern Abbey and St. Vincent, and though you are a murderer of cats and dogs, I shall always be your affectionate friend,

H. DAVY.

The letters which follow next, are a few of those remaining which he wrote to his family, to his mother and sisters, and they are given mainly for the purpose of showing the excursions which he made, and the endurance of his kindly home feelings, and especially his brotherly kindness to me, and my obligations to him.

To his Mother.

Glasgow, July 24, 1804.

My dear Mother—I have been absent from London about three weeks, which I have spent with much pleasure and interest.

I have had delightful weather for my journey, which has been through Cambridgeshire and Lincolnshire, along the Lakes of Cumberland and Westmoreland, and by Edinburgh.

At Edinburgh I spent some days. As far as I have penetrated into Scotland, I have had every reason to be satisfied with the hospitality and manners of the people.

I shall set out to-morrow for the Western Highlands, whence I shall proceed to the Hebrides and the Islands. I expect to be in Edinburgh again in the course of a month, where I shall be glad to receive a letter from you, though perhaps (as my route is not very certain), you had better not write till you hear from me again.

I hope my sisters and John are very well, and that Kitty does not like Penzance less after seeing London.

With kind love to all friends, I am, my dear mother,

Your very affectionate son,

H. DAVY.

To the Same.

January, 1807.

My dear Mother—A happy new year to you and all our family. I am much obliged to you for the marinaded pilchards, which were very good.

I shall write to you again in a day or two or three, and, as soon as I can get franks, send something to my sisters. I beg you to give ten shillings to Betty White, and ten shillings to Mary Launder,¹ from me, which I shall send in the franks.

I am very well, and have made some very important disco-

¹ Old servants.

veries, which must gain me new reputation.¹ I shall soon have a new and very honourable office, that of Secretary to the Royal Society, which will cost me very little trouble, and will make an addition to my income of one hundred guineas a year.

I have been obliged to dismiss George Farrant from the Royal Institution, in consequence of idleness and general neglect of his duty—I may say, very general ill conduct. Edmund Davy² is coming in his place. I hope he will make use of the great advantages such a place will afford.

Urge John to study. Next winter he shall pass with me, and if he does not take to science, I have no doubt I shall be able, amongst my great friends, to get a good situation for him.

I am, my dear mother,

Your very affectionate son,

H. DAVY.

*To his youngest Sister.*³

My dear Sister—I thank you for your letter. I have been constantly occupied for the last six weeks in some experiments which have led to very important results, and my labours are fully rewarded by happy discoveries.

I had a letter from John a few days ago. He seems anxious to know whether he is to quit Barnstaple⁴ at Christmas. I think he should, at all events.

I looked last week at the pattern of the gown that my sister put into my hands, and found it so worn and tattered that nothing can be made of it; I cannot, therefore, get your

¹ Those in electro-chemistry, for which the prize of three thousand francs was awarded him by the Institute of France.

² Late Professor of Chemistry to the Royal Dublin Society.

³ This letter is without date. From what is mentioned in it, doubtless it was written just after the discovery of the bases of the fixed alkalis, in October, 1807; it is given to show how, even then, he was not forgetful of home.

⁴ Barnstaple Grammar School.

gowns made till you send me another. The best way will be to give me measure of the waist, shoulders, length, &c., in this way, and there can then be no difficulties: thus, waist, E's, 15 inches, or whatever it may be; between shoulders; length from waist to skirt or train.

I do not wish to send gowns you cannot wear, and in this way they can be well made. By a piece of tape you can easily measure, and then try the length by a carpenter's rule, and give me the results for yourself, and for Kitty, and Grace, and I shall then be able to send your gowns a few days after I receive your letter.

If you should think a pattern better, you can send it under a cover, not weighing more than an ounce, addressed to me and inclosed in another cover addressed to G. B. Greenough, Esq., M.P., Charles Street, Westminster.

I shall write to my mother soon, about John. And now, my dear sister, having written you as stupid a letter as ever was written about gowns, I shall end with love to my mother, Kitty, Grace, and my aunts.

Your affectionate brother,

H. DAVY.

To his Mother.

October 5, 1808.

My dear Mother—As the time is now approaching when our plans with respect to John must be settled, I shall enter upon some statements which will be necessary to prevent disappointment on his part, and on your part, and to clear the way for the arrangements which must be made.

It would be very illiberal in me (though I may have the power of doing it) to bring John into the Royal Institution on a salary for which he could do little or nothing to promote the interests of the establishment; all that I can do with propriety is to get apartments assigned to him: coals, candles, attendance, and so on, he will have in my rooms. He will have an opportunity of pursuing science, or of pursuing medi-

cine, better in London than in any other place ; and the questions with regard to his pursuits will be, I think, these :—

Would he choose to devote himself to scientific pursuits, and stand the chance of finding a place in those public establishments and institutions which are now forming in London ?

Or, would he rather choose to be a surgeon or a physician ?

In either of these cases I can materially assist him, and after he has been in the Royal Institution for a few months, his bent will probably be decided.

His first year must, at all events, be considered as a year of expense, and it will be well if he is able to maintain himself after the first year. This must not be expected, though it may be hoped for.

Now I live very little in the Royal Institution ; I never dine there, and when I do not dine with some of my friends I dine at a coffee-house. It would be fatal to John's improvement (even if I had the power) to take him with me wherever I go ; and for him to live exactly as I do before he has the means of getting what I get, would spoil him for an economist ; and it will not be possible for me to alter my mode of living and to make myself a hermit on his account.

What I should propose is this, that he and my cousin Edmund should mess together when I am not at the Institution. Edmund will teach him economy, which is a very great virtue, and I will endeavour to teach him chemistry and philosophy. Edmund lives very respectably upon sixty pounds a year, looking forward to a better salary ; but he has his lodgings, coals, candles, meat dressed, attendance, and all those things. John, I should think, ought not to expend more than this till he is able to advance something. Now, if you will advance for him from time to time the sums which you paid for him the last year he was at school, reckoning clothes, &c., journeys, and so on, I will take care of the rest.¹

¹ The concluding part of this letter has been lost.

To the Same.

August 20, 1809.

My dear Mother—I have not written lately, because John has been able to say all that I can say, and I should not write now, except that I can say something which John cannot say, and which I am sure will give you and all our family pleasure.

John has been constantly occupied, and very successfully. His talents are gradually and healthfully showing themselves, and I do not think it possible for any one to make a surer progress. He is everything we could desire, in temper, in disposition, and in abilities, and I feel full confidence that, with the blessing of God, he will become an eminent person, and will distinguish himself in good and useful pursuits.

Pray give my best love to my sisters. As soon as I have anything to say I will write to Grace and to Betsy, that is, my two next letters shall be to them. And beg them and my aunts, particularly my aunt Millett, for I have seen my aunt Sampson within a short space, not to suppose that I do not often think of them with the kindest affection, because I do not write. At present, except when I resolve to be *idle* for health's sake, I devote every moment to labours which I hope will not be wholly ineffectual in benefiting society, and which will not be wholly inglorious for my country hereafter; and the feeling of this is the *reward* which will constantly keep me employed.

Believe me to be, my dear mother,

Your affectionate son,

H. DAVY.

The correspondence between my brother and Coleridge commenced, as already stated, before he left Clifton. It was carried on in the same affectionate and confidential manner afterwards, and was continued with little interruption till the latter quitted

England for Malta in the early spring of 1804. Most of Coleridge's letters I shall insert consecutively, these being chiefly of interest psychologically, and independent in a great measure of time and passing events. The particulars in the first of these letters, respecting Blumenbach's Manual of Natural History, are only note-worthy as showing in their limits and poverty the vast advance of the science during the fifty years which have passed. I may remark that the translation of it was one of the many works which this gifted man thought of, but never executed. And here, may I express the hope, that these letters will help to make him better known in his strength and affections, the latter especially, as well as in his own pathetic sense of a certain weakness of character which alike belonged to him. His high estimation of my brother this correspondence displays throughout, as well as my brother's exalted opinion of his powers of mind, enhancing regret for his infirmity of purpose. The following extract from Cottle's Reminiscences, confirmatory of this estimation, may deserve a place here:—

“Having,” says Mr. Cottle, “introduced Mr. Davy to Mr. C. some years before, I inquired for him with some anxiety, and expressed a hope that he was not tinctured with the prevailing scepticism since his removal from Bristol to London. Mr. C. assured me that he was not; that *his* heart and understanding were not the *soil* for infidelity. I then remarked: ‘During your stay in London you doubtless saw a great many of what are called the cleverest men—how do you estimate Davy, in comparison with these?’ Mr. Coleridge's reply was strong, but expressive: ‘Why, Davy can eat them all! There

is an energy, an elasticity in his mind, which enables him to seize on and analyze all questions, pushing them to their legitimate consequences. Every subject in Davy's mind has the principle of vitality. Living thoughts spring up like turf under his feet."

A few other extracts, these relating to Coleridge, from letters of my brother to Mr. Poole, may here be inserted as descriptive of his mental excellencies strangely mingled with weaknesses. Writing in 1803, he says:—

"Coleridge has left London for Keswick. During his stay in town I saw him seldomer than usual; when I did see him, it was generally in the midst of large companies, where he is the image of power and activity. His eloquence is unimpaired; perhaps it is softer and stronger. His will is less than ever commensurate with his ability. Brilliant images of greatness float upon his mind, like images of the morning clouds on the waters. Their forms are changed by the motions of the waves, they are agitated by every breeze, and modified by every sunbeam. He talked in the course of an hour of beginning three works; he recited the poem of *Christabel* unfinished, and as I had before heard it. What talent does he not waste in forming visions, sublime, but unconnected with the real world! I have looked to his efforts, as to the efforts of a creating being; but as yet he has not laid the foundation for the new world of intellectual forms."

A year later, he writes:—

"I have received a letter from Coleridge within the last three weeks. He writes from Malta in good spirits, and, as usual, from the depth of his being. God bless him! He was intended for a great man. I hope and trust he will, at some period, appear such."

After his return, my brother, addressing the same friend—it was in 1808—thus speaks of him:—

“Coleridge, after disappointing his audience twice from illness, is announced to lecture again this week.¹ He has suffered greatly from excessive sensibility, the disease of genius. His mind is a wilderness, in which the cedar and the oak, which might aspire to the skies, are stunted in their growth by underwood, thorns, briars, and parasitical plants. With the most exalted genius, enlarged views, sensitive heart, and enlightened mind, he will be the victim of want of order, precision, and regularity. I cannot think of him without experiencing the mingled feelings of admiration, regard, and pity.”

Considering his strangely blended character, so anomalous, so incongruous, it is not difficult to imagine the feelings which influenced him, when he wrote his own epitaph—

“Stop, Christian passer-by : stop, child of God,
And read, with gentle breast. Beneath this sod
A poet lies, or that which once seemed he—
O lift a thought in prayer for S. T. C.
That he who many a year with toil of breath
Found death in life, may here find life in death ;
Mercy for praise—to be forgiven for fame
He asked, and hoped through Christ. Do thou the same.”

From Samuel Taylor Coleridge, Esq.

Saturday Morning, Mr. T. Poole's, Nether Stowey, Somerset.
My dear Davy—I received a very kind letter from Godwin, in which he says that he never thinks of you but with a

¹ On Shakespeare.

brother's feeling of love and expectation. Indeed, I am sure he does not.

I think of translating Blumenbach's¹ Manual of Natural History: it is very well written, and would, I think, be useful both to students, as an admirable direction to their studies, and to others it would supply a general knowledge of the subject. I will state the contents of the book: 1. Of the naturalia in general, and their divisions into three kingdoms. 2. Of organised bodies in general. 3. Of animals in general. 4. Of the mammalia. 5. Birds. 6. Amphibious. 7. Fishes. 8. Insects. 9. Worms. 10. Plants. 11. Of minerals in general. 12. Of stones and earthy fossils. 13. Of mineral salts. 14. Combustible minerals. 15. Of metals. 16. Petrifactions. At the end there is an alphabetical index, so that it is at once a natural history and a dictionary of natural history. To each animal, &c., all the European names are given, with of course the scientific characteristics. I have the last edition, *i.e.*, that of April, 1799. Now, I wish to know from you, whether there is in English already any work of one volume (this would make 800 pages), that renders this useless. In short, should I be right in advising Longman to undertake it? Answer me as soon as you conveniently can. Blumenbach has been no very great discoverer, though he has done some respectable things in that way, but he is a man of enormous knowledge, and has an *arranging* head. Ask Beddoes, if you do not know.

When you have leisure, you would do me a great service, if you would briefly state your metaphysical system of impressions, ideas, pleasures, and pains, the laws that govern them, and the reasons which induce you to consider them as essen-

¹ When he first went into Germany, viz., in the autumn of 1798, he attended the lectures of this distinguished professor, at Göttingen, on Physiology and Natural History. See his Life by Gillman, in which is an interesting "Fragment of a Journey (made by him) over the Brocken, &c., in 1799."

tially distinct from each other. My motive for this request is the following:—As soon as I *settle*, I shall read Spinoza and Leibnitz, and I particularly wish to know wherein they agree with, and wherein differ from you. If you will do this, I promise you to send you the result, and with it my own creed.

God bless you !

S. T. COLERIDGE.

Blumenbach's book contains references to all the best writers on each subject. My friend, T. Poole, begs me to ask what, in your opinion, are the parts or properties in the oak which tan skins? and is cold water a complete menstruum for these parts or properties? I understand from Poole that nothing is so little understood as the chemical theory of tan, though nothing is of more importance in the circle of manufactures; in other words, does oak bark give out to cold water all those of its parts which tan?

From the Same.

Keswick, Friday Evening, July 25, 1800.

My dear Davy—Work hard, and if success do not dance up like the bubbles in the salt (with the spirit lamp under it), may the Devil and his dam take success! My dear fellow! from the window before me there is a great *camp* of mountains. Giants seem to have pitched their tents there. Each mountain is a giant's tent, and how the light streams from them. Davy! I *ache* for you to be with us.

W. Wordsworth is such a lazy fellow, that I bemire myself by making promises for him: the moment I received your letter, I wrote to him. He will, I hope, write immediately to Biggs and Cottle. At all events, those poems must not as yet be delivered up to them, because that beautiful poem,

"The Brothers," which I read to you in Paul Street, I neglected to deliver to you, and that must begin the volume. I trust, however, that I have invoked the sleeping bard with a spell so potent, that he will awake and deliver up that sword of Argantyr, which is to rive the enchanter *Gaudyverse* from his crown to his foot.

What did you think of that case I translated for you from the German? That I was a well-meaning sutor who had ultra-crepidated¹ with more zeal than wisdom!! I give myself credit for that word "ultra-crepidated," it started up in my brain like a creation. I write to Tobin by this post. Godwin is gone Irelandward, on a visit to Curran, says the "Morning Post;" to Grattan, writes C. Lamb.

We drank tea the night before I left Grasmere, on the island in that lovely lake; our kettle swung over the fire, hanging from the branch of a fir-tree, and I lay and saw the woods, and mountains, and lake all trembling, and as it were idealized through the subtle smoke, which rose up from the clear, red embers of the fir-apples which we had collected: afterwards we made a glorious bonfire on the margin, by some elder bushes, whose twigs heaved and sobbed in the uprushing column of smoke, and the image of the bonfire, and of us that danced round it, ruddy, laughing faces in the twilight; the image of this in a lake, smooth as that sea, to whose waves the Son of God had said, *Peace!* May God, and all his sons, love you as I do.

S. T. COLERIDGE.

Sara desires her kind remembrances. Hartley is a spirit that dances on an aspen leaf; the air that yonder sallow-faced and yawning tourist is breathing, is to my babe a perpetual nitrous oxide. Never was more joyous creature born. Pain with him is so wholly transubstantiated by the joys that had

¹ "Ne sutor ultra crepidam."

rolled on before, and rushed on after, that oftentimes five minutes after his mother has whipt him, he has gone up and asked her to whip him again.

From the Same.

October 18, 1800.

My dear Davy—Our mountains northward end in the mountain Carrock—one huge, steep, enormous bulk of stones, desolately variegated with the heath plant; at its foot runs the river Calder, and a narrow vale between it and the mountain Bowscale, so narrow, that in its greatest width it is not more than a furlong. But that narrow vale is so green, so beautiful, there are moods in which a man might weep to look at it. On this mountain Carrock, at the summit of which are the remains of a vast Druid circle of stones, I was wandering, when a thick cloud came on, and wrapped me in such darkness, that I could not see ten yards before me, and with the cloud a storm of wind and hail, the like of which I had never before seen and felt. At the very summit is a cone of stones, built by the shepherds, and called the Carrock Man. Such cones are on the tops of almost all our mountains, and they are all called *men*. At the bottom of the Carrock Man I seated myself for shelter, but the wind became so fearful and tyrannous, that I was apprehensive some of the stones might topple down upon me, so I groped my way farther down and came to three rocks, placed on this wise $\frac{1}{3}\diagup^2$ each one supported by the other like a child's house of cards, and in the hollow and screen which they made, I sate for a long while sheltered, as if I had been in my own study in which I am now writing: there I sate with a total feeling worshipping the power and "eternal link" of energy. The darkness vanished as by enchantment; far off, far, far off to the south, the mountains of Glaramara and Great Gable and their family

appeared distinct, in deepest, sablest *blue*. I rose, and behind me was a rainbow bright as the brightest. I descended by the side of a torrent, and passed, or rather crawled (for I was forced to descend on all fours), by many a naked waterfall, till fatigued and hungry (and with a finger almost broken, and which remains swelled to the size of two fingers), I reached the narrow vale, and the single house nestled in ash and sycamores. I entered to claim the universal hospitality of this country; but instead of the life and comfort usual in these lonely houses, I saw dirt, and every appearance of misery—a pale woman sitting by a peat fire. I asked her for bread and milk, and she sent a small child to fetch it, but did not rise herself. I eat very heartily of the black, sour bread, and drank a bowl of milk, and asked her to permit me to pay her. “Nay,” says she, “we are not so scant as that—you are right welcome; but do you know any help for the rheumatics, for I have been so long ailing that I am almost fain to die?” So I advised her to eat a great deal of mustard, having seen in an advertisement something about essence of mustard curing the most obstinate cases of rheumatism. But do write me, and tell me some cure for the rheumatism; it is in her shoulders, and the small of her back chiefly. I wish much to go off with some bottles of stuff to the poor creature. I should walk the ten miles as ten yards. With love and honour,

My dear Davy, yours,

S. T. COLERIDGE.

From the Same.

Thursday night, October 9, 1800.

My dear Davy—I was right glad, glad with a *stagger* of the heart, to see your writing again. Many a moment have I had all my France and England curiosity suspended and lost, looking in the advertisement front column of the Morning

Post Gazeteer, for *Mr. Davy's Galvanic habitudes of charcoal*.—Upon my soul, I believe there is not a letter in those words round which a world of imagery does not circumsolve ; your room, the garden, the cold bath, the moonlight rocks, Barristed, Moore, and simple-looking Frere, and dreams of wonderful things attached to your name—and Skiddaw, and Glaramara, and Eagle Crag, and you, and Wordsworth, and me, on the top of them ! I pray you do write to me immediately, and tell me what you mean by the possibility of your assuming a new occupation ;¹ have you been successful to the extent of your expectations in your late chemical inquiries ?

In your poem,² “impressive” is used for *impressible* or passive, is it not ? If so, it is not English ; life *diffusive* likewise is not English. The last stanza introduces *confusion* into my mind, and despondency—and has besides been so often said by the materialists, &c., that it is not worth repeating. If the poem had ended more originally, in short, but for the last stanza, I will venture to affirm that there were never so many lines which so uninterruptedly combined natural and beautiful words with strict philosophic truths, *i. e.*, scientifically philosophic. Of the second, third, fourth, fifth, sixth, and seventh stanzas, I am doubtful which is the most beautiful. Do not imagine that I cling to a fond love of future identity, but the thought which you have expressed in the last stanzas might be more grandly, and therefore more consolingly exemplified. I had forgot to say that sameness and identity are words too etymologically the same to be placed so close to each other.

As to myself, I am doing little worthy the relation. I write for Stuart in the Morning Post, and I am compelled by the god Pecunia, which was one name of the supreme Jupiter,

¹ No doubt the leaving of the Pneumatic for the Royal Institution.

² That entitled, “Written after Recovery from a Dangerous Illness.” It is to be found in the Memoirs of his Life, vol. i, p. 390. Coleridge's critical remarks apply to it as it was first written ; the words objected to are not to be found in it in its corrected printed state.

to give a volume of letters from Germany, which will be a decent *lounge* book, and not an atom more. The *Christabel* was running up to 1,300 lines, and was so much admired by Wordsworth, that he thought it indelicate to print two volumes with his name, in which so much of another man's was included; and which was of more consequence, the poem was in direct opposition to the very purpose for which the lyrical ballads were published, viz., an experiment to see how far those passions which alone give any value to extraordinary incidents were capable of interesting in and for themselves in the incidents of common life. We mean to publish the *Christabel*, therefore, with a long blank-verse poem of Wordsworth's, entitled *The Pedlar*.¹ I assure you I think very differently of *Christabel*. I would rather have written *Ruth*, and *Nature's Lady*, than a million such poems. But why do I calumniate my own spirit by saying I would rather? God knows it is as delightful to me that they *are* written. I *know* that at present, and I *hope* that it *will* be so; my mind has *disciplined* itself into a willing exertion of its powers, without any reference to their comparative value.

I cannot speak favourably of W.'s health, but indeed he has not done common justice to Dr. Beddoes's kind prescriptions. I saw his countenance darken, and all his hopes vanish, when he saw the *prescriptions*—his *scepticism* concerning medicines! nay, it is not enough *scepticism*! Yet, now that peas and beans are over, I have hopes that he will in good earnest make a fair and full trial. I rejoice with sincere joy at Beddoes's recovery.

Wordsworth is fearful you have been much teased by the printers on his account, but you can sympathise with him. The works which I gird myself up to attack as soon as money concerns will permit me, are the *Life of Lessing*, and the *Essay on Poetry*. The latter is still more at my heart than

¹ A name changed to "The Excursion."

the former: its title would be an essay on the elements of poetry—it would in reality be a *disguised* system of morals and politics.

When you write, and do write soon, tell me how I can get your essay on the nitrous oxide. If you desired Johnson to have one sent to Lackington's, to be placed in Mr. Crosthwaite's monthly parcel for Keswick, I should receive it. Are your galvanic discoveries important? What do they lead to? All this is *ultra crepidation*, but would to heaven I had as much knowledge as I have sympathy! My wife and children are well; the baby was dying some weeks ago, so the good people would have it baptized; his name is Derwent Coleridge, so called from the river, for fronting our house the Greta runs into the Derwent. Had it been a girl, the name should have been Greta. By the by, Greta, or rather Grieta, is exactly the Cocytus of the Greeks; the word, literally rendered in modern English, is, "The loud Lamenting;" to griet, in the Cambrian dialect, signifying to roar aloud for grief or pain, and it does *roar* with a vengeance!

I will say nothing about Spring—a thirsty man tries to think of anything but the stream when he knows it to be ten miles off!

God bless you! Your most affectionate

S. T. COLERIDGE.

From the Same.

Greta Hall, Tuesday night, December 2, 1800.

My dear Davy—By an accident I did not receive your letter till this evening. I would that you had added to the account of your indisposition the probable causes of it. It has left me anxious whether or no you have not exposed yourself to unwholesome influences in your chemical pursuits. There are *few* beings both of hope and performance, but few who

combine the "are" and the "will be." For God's sake, therefore, my dear fellow, do not rip open the bird that lays the golden eggs. I have not received your book. I read yesterday a sort of medical review about it. I suppose Longman will send it to me when he sends down the Lyrical Ballads to Wordsworth. I am solicitous to read the latter part. Did there appear to you any remote analogy between the case I translated from the German Magazine and the effects produced by your gas? Did Carlisle¹ ever communicate to you, or has he in any way published his facts concerning *pain*, which he mentioned when we were with him? It is a subject which *exceedingly interests* me. I want to read something by somebody expressly on *pain*, if only to give an *arrangement* to my own thoughts, though if it were well treated, I have little doubt it would revolutionize them. For the last month I have been trembling on through sands and swamps of evil and bodily grievance. My eyes have been inflamed to a degree that rendered reading and writing scarcely possible; and strange as it seems, the act of metre composition, as I lay in bed, perceptibly affected them, and my voluntary ideas were every minute passing, more or less transformed into vivid spectra. I had leeches repeatedly applied to my temples, and a blister behind my ear—and my eyes are now my own, but in the place where the blister was, six small but excruciating boils have appeared, and harass me almost beyond endurance. In the meantime my darling Hartley has been taken with a stomach illness, which has ended in the yellow jaundice; and this greatly alarms me. So much for the doleful! Amid all these changes, and humiliations, and fears, the sense of the Eternal abides in me, and preserves unsubdued my cheerful faith, that all I endure is full of blessings!

At times, indeed, I would fain be somewhat of a more tangible utility than I am; but so I suppose it is with all of us—

¹ Afterwards Sir Antony, a distinguished surgeon.

one while cheerful, stirring, feeling in resistance nothing but a joy and a stimulus; another, while drowsy, self-distrusting, prone to rest, loathing our own self-promises, withering our own hopes—our hopes, the vitality and cohesion of our being!

I purpose to have *Christabel* published by itself—this I publish with confidence—but my travels in Germany come from me now with mortal pangs. Nothing but the most pressing necessity could have induced me—and even now I hesitate and tremble. Be so good as to have all that is printed of *Christabel* sent to me per post.

Wordsworth has nearly finished the concluding poem. It is of a mild, unimposing character, but full of beauties to those short-necked men who have their hearts sufficiently near their heads—the relative distance of which (according to citizen Tourder, the French translator of Spallanzani) determines the sagacity or stupidity of all bipeds and quadrupeds.

There is a deep blue cloud over the heavens; the lake, and the vale, and the mountains, are all in darkness; only the *summits* of all the mountains in long ridges, covered with snow, are bright to a dazzling excess. A glorious scene! Hartley was in my arms the other evening, looking at the sky; he saw the moon glide into a large cloud. Shortly after, at another part of the cloud, several stars sailed in. Says he, “Pretty creatures! they are going in to see after their mother moon.”

Remember me kindly to King. Write as often as you can; but above all things, my loved and honoured dear fellow, do not give up the idea of letting me and Skiddaw see you.

God love you!

S. T. COLERIDGE.

Tobin writes me that Thompson¹ has made some lucrative discovery. Do you know aught about it? Have you seen T. Wedgwood since his return?

¹ The late Mr. James Thompson, of Clitheroe.

From the Same.

February 3, 1801.

My dear Davy—I can scarcely reconcile it to my conscience to make you pay postage for another letter. O, what a fine unveiling of modern politics it would be if there were published a minute detail of all the sums received by Government from the Post establishment, and of all the outlets in which the sums so received flowed out again; and, on the other hand, all the domestic affections that had been stifled, all the intellectual progress that would have been, but is not, on account of the heavy tax, &c., &c. The letters of a nation ought to be paid for as an article of national expense. Well! but I did not take up this paper to flourish away in splenetic politics. A gentleman resident here, his name Calvert, an idle, good-hearted, and ingenious man, has a great desire to commence fellow-student with me and Wordsworth in chemistry. He is an intimate friend of Wordsworth's, and he has proposed to W. to take a house which he (Calvert) has nearly built, called Windy Brow, in a delicious situation, scarce half a mile from Greta Hall, the residence of S. T. Coleridge, Esq., and so for him (Calvert) to live with them, *i. e.*, Wordsworth and his sister. In this case he means to build a little laboratory, &c. Wordsworth has not quite decided, but is strongly inclined to adopt the scheme, because he and his sister have before lived with Calvert on the same footing, and are much attached to him: because my health is so precarious and so much injured by wet, and his health, too, is like little potatoes, no great things, and therefore Grasmere (thirteen miles from Keswick) is too great a distance for us to enjoy each other's society, without inconvenience, as much as it would be profitable for us both: and likewise because he feels it more necessary for him to have some intellectual pursuit less closely connected with deep passion than poetry, and is of course desirous, too, not to be so wholly ignorant of knowledge so

exceedingly important. However, whether Wordsworth come or no, Calvert and I have determined to begin and go on. Calvert is a man of sense and some originality, and is besides what is well called a handy man. He is a good practical mechanic, &c., and is desirous to lay out any sum of money that is necessary. You know how long, how ardently I have wished to initiate myself in Chemical science, both for its own sake, and in no small degree likewise, my beloved friend, that I may be able to sympathize with all that you do and think. Sympathize blindly with it all I do even *now*, God knows! from the very middle of my heart's heart, but I would fain sympathize with you in the light of knowledge. This opportunity is exceedingly precious to me, as on my own account I could not afford the least additional expense, having been already, by long and successive illnesses, thrown behindhand, so much, that for the next four or five months, I fear, let me work as hard as I can, I shall not be able to do what my heart within me *burns* to do, that is, to *concenter* my free mind to the affinities of the feelings with words and ideas under the title of "Concerning Poetry, and the nature of the Pleasures derived from it." I have faith that I do understand the subject, and I am sure that if I write what I ought to do on it, the work would supersede all the books of metaphysics, and all the books of morals too. To whom shall a young man utter *his pride*, if not to a young man whom he loves?

I beg you, therefore, my dear Davy, to write to me a long letter when you are at leisure, informing me:—Firstly, What books it will be well for me and Calvert to purchase. Secondly, Directions for a convenient little laboratory. Thirdly, To what amount apparatus would run in expense, and whether or no you would be so good as to superintend its making at Bristol. Fourthly, Give me your advice how to *begin*. And, fifthly, and lastly, and mostly, do send a *drop* of hope to my parched tongue, that you will, if you can, come and visit me in the spring. Indeed, indeed, you ought to see this country,

this beautiful country, and then the joy you would send into me!

The shape of this paper will convince you with what eagerness I began this letter; I really did not see that it was not a sheet.

I have been *thinking* vigorously during my illness, so that I cannot say that my long, long wakeful nights have been all lost to me. The subject of my meditations has been the relations of thoughts to things—in the language of Hume, of ideas to impressions. I may be truly described in the words of Descartes: I have been “*res cogitans, id est, dubitans, affirmans, negans, pauca intelligens, multa ignorans, volens, nolens, imaginans etiam, et sentiens.*” I please myself with believing that you will receive no small pleasure from the result of these broodings, although I expect in you (in some points) a determined opponent, but I say of my mind in this respect: “*Manet imperterritus ille hostem magnanimum opperiens, et mole sua stat.*” Every poor fellow has his proud hour sometimes, and this I suppose is mine.

I am better in every respect than I was, but am still *very feeble*. The weather has been woefully against me for the last fortnight, having rained here almost incessantly. I take quantities of bark, but the effect is (to express myself with the dignity of science) $x = 0000000$, and I shall not gather strength, or that little suffusion of bloom which belongs to my healthy state, till I can walk out.

God bless you, my dear Davy! and

Your ever affectionate friend,

S. T. COLERIDGE.

P.S.—An electrical machine, and a number of little nick-nacks connected with it, Mr. Calvert has.—*Write.*

From the Same.

Monday, May 4, 1801.

My dear Davy—I heard from Tobin the day before yesterday—nay, it was Friday. From him I learn that you are giving lectures on galvanism. Would to God I were one of your auditors! My motive muscles tingled and contracted at the news, as if you had bared them, and were *zincifying* their life-mocking fibres.

When you have leisure and impulse—perfect leisure and a complete impulse—write to me, but only then. For though there does not exist a man on earth who yields me greater pleasure by writing to me, yet I have neither pain nor disquietude from your silence. I have a deep faith in the guardianship of Nature over you—of the Great Being whom you are manifesting. Heaven bless you, my dear Davy!

I have been rendered uneasy by an account of the Lisbon packet's non-arrival, lest Southey should have been on board it. Have you heard from him lately?

It would seem affectation to write to you and say nothing of my health; but in truth I am weary of giving useless pain. Yesterday I should have been incapable of writing you this scrawl, and to-morrow I may be as bad. "*Sinking, sinking, sinking!* I feel that I am *sinking*." My medical attendant says that it is irregular gout, with nephritic symptoms. *Gout*, in a young man of twenty-nine!! Swollen knees, and knotty fingers, a loathing stomach, and a dizzy head. Trust me, friend, I am at times an object of moral disgust to my own mind! But that this long illness has impoverished me, I should immediately go to St. Miguels, one of the Azores—the baths and the delicious climate might restore me—and if it were possible, I would afterwards send over for my wife and children, and settle there for a few years; it is exceedingly cheap. On this supposition Wordsworth and his sister have with generous friendship offered to settle there with me—and

happily our dear Southey would come too. But of this I pray you, my dear fellow, do not say a syllable to any human being, for the scheme, from the present state of my circumstances, is rather the thing of a *wish* than of a *hope*.

If you write to me, pray in a couple of sentences tell me whether Herschell's thermometric *spectrum* (in the Philos. Trans.) will lead to any revolution in the chemical philosophy. As far as *words* go, I have become a formidable chemist—having got by heart a prodigious quantity of terms, &c., to which I attach *some* ideas, very scanty in number, I assure you, and right meagre in their individual persons. That which must discourage me in it is, that I find all *power* of vital attributes to depend on modes of *arrangement*, and that chemistry throws not even a distant rushlight glimmer upon this subject. The *reasoning*, likewise, is always unsatisfactory to me. I am perpetually saying, probably there are many agents hitherto undiscovered. This cannot be reasoning: we must have a deep conviction that all the *terms* have been exhausted. This is saying no more than that (with Dr. Beddoes's leave) chemistry can never possess the same kind of certainty with the mathematics—in truth, it is saying nothing. I grow, however, exceedingly interested in the subject.

God love you, my dear friend! From Tobin's account, I fear that I must give up a very sweet vision—that of seeing you this summer. The summer after, my ghost perhaps may be a gas.

Yours affectionately,

S. T. COLERIDGE.

From the Same.

Greta Hall, Keswick, May 20, 1801.

My dear Davy—Though we of the north must forego you, yet I shall rejoice when I receive a letter from you from Corn-

wall. I must believe that you have made some important discoveries in galvanism, and connected the facts with other more interesting ones, or I should be puzzled to conceive how that subject could furnish matter for more than one lecture. If I recollect aright, you have identified it with electricity, and that indeed is a wide field. I shall dismiss my British Critic, and take in Nicholson's Journal, and then I shall know something about you. I am sometimes apprehensive that my passion for science is scarcely true and genuine—it is but *Davyism*! that is, I fear that I am more delighted at *your* having discovered facts than at the facts having been discovered.

My health is better. I am indeed eager to believe that I am really beginning to recover, though I have had so many short recoveries followed by severe relapses, that I am at times almost afraid to hope. But cheerful thoughts come with genial sensations; and hope is itself no mean medicine.

I am anxious respecting Robert Southey. Why is he not in England? Remember me kindly to Tobin. As soon as I have anything to communicate I will write to him. But, alas! sickness turns large districts of time into dreary uniformity of sandy desolation. Alas, for Egypt—and Menou! However, I trust the *English* will keep it, if they take it, and something will be gained to the cause of human nature.

Heaven bless you!

S. T. COLERIDGE.

From the Same.

Greta Hall, Keswick, Cumberland, October 31, 1801.

My dear Davy—I do not know by what fatality it has happened, but so it is; that I have thought more often of you, and I may say, *yearned* after your society more for the last three months than I ever before did, and yet I have not

written to you. But you know that I honour you, and that I love whom I honour. Love and esteem with me have no individual being; and wherever this is not the case, I suspect there must be some lurking moral superstition which nature gets the better of; and that the real meaning of the phrase "I love him though I cannot esteem him," is—I esteem him, but not according to my system of esteem. But you, my dear fellow, *all* men love and esteem—which is the only *suspicious* part of your character—at least according to the 5th chapter of St. Matthew.—God bless you.

And now for the business of this letter. *If I can*, I leave this place so as to be in London on Wednesday, the 11th of next month; in London I shall stay a fortnight; but as I am in feeble health, and have a perfect phobia of inns and coffee-houses, I should rejoice if you or Southey should be able to offer me a bed-room for the fortnight aforesaid. From London I move southward. Now for the italicized words *if I can*. The cryptical and implicit import of which is—I have a damned thorn in my leg, which the surgeon has not been yet able to extract—and but that I have metaphysicized most successfully on *Pain*, in consequence of the accident, by the Great Scatterer of Thoughts, I should have been half mad. But as it is I have borne it *like a woman*, which, I believe, to be two or three degrees at least beyond a *stoic*. A suppuration is going on, and I endure in hope.

I have redirected some of Southey's letters to you, taking it for granted that you will see him immediately on his arrival in town; he left us yesterday afternoon. Let me hear from you, if it be only to say what I know already, that you will be glad to see me. O, dear friend, thou one of the two human beings of whom I dare hope with a hope, that elevates my own heart. O bless you!

S. T. COLERIDGE.

From the Same.

Tuesday morning, 7, Barnard's Inn, Holborn.¹

My dear Davy—I trusted my cause last Sunday, I fear, to an unsympathizing agent. To Mr. Tuffin I can scarcely think myself bound to make a direct apology, as my promise was wholly conditional. This I did, not only from general foresight, but from the possibility of hearing from you, that you had not been able to untie your former engagement. To you, therefore, I owe the apology: and on you I expressly and earnestly desired Tobin to call and to explain for me, that I had been in an utterly incompatible state of bodily feeling the whole evening at Mr. Renny's; that I was much hurt by the walk home through the wet; instantly on my return here an attack in my bowels; that this had not wholly left me, and therefore that I could not come, unless the weather altered. By which I did not mean merely its *holding up* (though even this it did not do at four o'clock at Barnard's Inn, the sleety rain was still falling, though slightly), but the drying up of the rawness and dampness, which would infallibly have diseased me, before I had reached the Institution—not to mention the effect of sitting a long evening in damp clothes and shoes on an invalid, scarcely recovered from a diarrhoea. I have thought it fit to explain at large, both as a mark of respect to you, and because I have very unjustly acquired a character for breaking engagements, entirely from the non-sympathy of the well with the sick, the robust with the weakly. It must be difficult for most men to conceive the extreme reluctance with which I go at all into *company*, and the unceasing depression which I am struggling up against during the whole time I am in it, which too often makes me drink more *during dinner* than I ought to do, and as often forces me into efforts of almost obtrusive conversation, *acting* the oppo-

¹ The twopenny post mark is that of 6th March, 1804.

site of my real state of mind in order to arrive at a medium, as we roll paper the opposite way in order to smoothe it.

Be so good as to tell me what hour you expect Mr. Sotheby on Thursday.

I am, my dear Davy, with sincere and affectionate esteem, yours ever,

S. T. COLERIDGE.

The next letter, one from my brother to Coleridge, and that which follows it from Coleridge to him in reply, were written, as is evident from their tenor, just before his embarking for the Mediterranean in quest of health, the shattered state of which he so feelingly describes.

Royal Institution, Twelve o'Clock, Monday.

My dear Coleridge—My mind is disturbed, and my body harassed by many labours; yet I cannot suffer you to depart, without endeavouring to express to you some of the unbroken and higher feelings of my spirit, which have you at once for their cause and object.

Years have passed since we first met; and your presence, and recollections in regard to you, have afforded me continued sources of enjoyment. Some of the better feelings of my nature have been elevated by your converse; and thoughts which you have nursed, have been to me an eternal source of consolation.

In whatever part of the world you are, you will often live with me, not as a fleeting idea, but as a recollection possessed of creative energy,—as an imagination winged with fire, inspiring and rejoicing.

You must not live much longer without giving to all men the proof of power, which those who know you feel in admiration. Perhaps at a distance from the applauding and cen-

suring murmurs of the world, you will be best able to execute those great works which are justly expected from you: you are to be the historian of the philosophy of feeling. Do not in any way dissipate your noble nature! Do not give up your birthright!

May you soon recover perfect health—the health of strength and happiness! May you soon return to us, confirmed in all the powers essential to the exertion of genius. You were born for your country, and your native land must be the scene of your activity. I shall expect the time when your spirit, bursting through the clouds of ill health, will appear to all men, not as an uncertain and brilliant flame, but as a fair and permanent light, fixed, though constantly in motion,—as a sun which gives its fire, not only to its attendant planets, but which sends beams from all its parts into all worlds.

May blessings attend you, my dear friend! Do not forget me: we live for different ends, and with different habits and pursuits; but our feelings with regard to each other have, I believe, never altered. They must continue; they can have no natural death; and, I trust, they can never be destroyed by fortune, chance, or accident.

H. DAVY.

Sunday, March 25, 1804.

My dear Davy—I returned from Mr. Northcote's, having been diseased by the change of weather too grievously to permit me to continue sitting, for in those moods of body brisk motion alone can prevent me from falling into distempered sleep. I came in meditating a letter to you, or rather the writing of the letter, which I had meditated yesterday, even while you were yet sitting with us. But it would be the merest confusion of my mind to force it into activity at present. Yours of this morning must have sunken down first, and must have found its abiding resting-place. O, dear friend! blessed

are the moments, and if not moments of *humility*, yet as distant from whatever is opposite to humility, as humility itself, when I am able to hope of myself as you have dared hope of and for me. Alas ! they are neither many nor of quick recurrence. There *is* a something, an essential something, wanting in me. I feel it, I *know* it—though what it is, I can but guess. I have read somewhere, that in the tropical climates there are annuals as lofty and of as an ample girth as forest trees:—So by a very dim likeness I seem to myself to distinguish Power from Strength—and to have only the former. But of this I will speak again : for if it be no reality, if it be no more than a disease of my mind, it is yet deeply rooted and of long standing, and requires help from one who loves me in the light of knowledge. I have written these lines with a compelled understanding, my feelings elsewhere at work—and I fear, unwell as I am, to indulge my deep emotion, however ennobled or endeared. Dear Davy ! I have always loved, always honoured, always had faith in you, in every part of my being that lies below the surface ; and whatever changes may have now and then *rippled* even upon the surface, have been only jealousies concerning you in behalf of all men, and fears from exceeding great hope. I cannot be prevented from uttering and manifesting the strongest convictions and best feelings of my nature by the incident, that they of whom I think so highly, esteem me in return, and entertain reciprocal hopes. No ! I would to God, I thought it myself even as you think of me, but.....

So far had I written, my dear Davy, yesterday afternoon, with all my faculties beclouded, writing mostly about myself,—but, Heaven knows ! thinking wholly about you. I am too sad, too much dejected to write what I could wish. Of course I shall see you this evening here at a quarter after nine. When I mentioned it to Sir George, “ Too late,” said he ; “ no, if it were twelve o’clock, it would be better than his not coming.” They are really kind and good [Sir George and

Lady Beaumont]. Sir George is a remarkably *sensible* man, which I mention, because it *is* somewhat REMARKABLE in a painter of genius, who is at the same time a man of rank and an exceedingly amusing companion.

I am still but very indifferent—but that is so old a story, that it affects me but little. To see *you* look so very unwell on Saturday, was a new thing to me, and I want a word something short of affright, and a little beyond anxiety, to express the feeling that haunted me in consequence.

I trust that I shall have time, and the greater spirit, to write to you from Portsmouth, a part at least of what is in and upon me in my more genial moments.

But always I am and shall be, my dear Davy, with hope, and esteem, and affection, the aggregate of many Davys,

Your sincere friend,

S. T. COLERIDGE.

On Coleridge's return from Malta and Sicily, after a suspension for awhile of their correspondence, it was renewed, and, it may be inferred, was renewed by my brother, on the occasion of inviting him to give a course of Lectures at the Royal Institution. Extracts from these letters may suffice;—the parts omitted are painful as regards Coleridge's confessions of weakness and infirmity of purpose, or without interest, as relating to a fruitless and troublesome negotiation about the printing and publishing of "The Friend." To these latter letters, the letter of my brother to Mr. Poole, their common friend, may serve as an introduction. This gentleman survived my brother a few years; he died in September, 1837. The friend of Southey, Coleridge, and Words-

worth, his name will go down to posterity, and with the rare felicity of being associated only with what is worthy. The last winter my brother spent in England was, for most part, under his roof at Nether Stowey, in Somersetshire; and it was there he composed the greater part of *Salmonia*.

To Thomas Poole, Esq.

London, August 28, 1807.

My dear Poole—I am obliged to be in the neighbourhood of town during the greater part of the summer, for the purpose of correcting the press for the *Philosophical Transactions*.

I made a rapid journey into Cornwall for the sake of seeing my family, and it was not in my power, had I received your letter at Lyme, to have accepted your kind invitation.

If Coleridge is still with you, will you be kind enough to say to him, that I wrote nearly a week ago two letters about lectures, and not knowing where he was, I addressed them to him at different places. I wish very much he would seriously determine on this point. The managers of the Royal Institution are very anxious to engage him; and I think he might be of material service to the public, and of benefit to his own mind, to say nothing of the benefit his purse might receive. In the present condition of society, his opinions in matters of taste, literature, and metaphysics, must have a healthy influence; and, unless he soon become an actual member of the living world, he must expect to be brought to judgment “for hiding his light.”

The times seem to me to be less dangerous as to the immediate state of the country, than they were four years ago. The extension of the French empire has weakened the disposable force of France. Bonaparte seems to have abandoned the idea of invasion, and if our government is active, we have little

to dread from a maritime war, at least for some time. Sooner or later our colonial empire must fall, in due time, when it has answered its ends.

The wealth of our island may be diminished, but the strength of mind of the people cannot easily pass away ; and our literature, our science, and our arts, and the dignity of our nature, depend little upon our external relations. When we had fewer colonies than Genoa, we had Bacons and Shakespeares. The wealth and prosperity of the country are only the *comeliness* of the body—the fulness of the flesh and fat ;—but the spirit is independent of them—it requires only muscle, bone, and nerve, for the true exercise of its functions. We cannot lose our liberty, because we cannot cease to *think* ; and ten millions of people are not easily annihilated.

I am, my dear Poole,

Very truly yours,

H. DAVY.

From Samuel Taylor Coleridge, Esq.

September 11, 1807.

. Yet how very few are there whom I esteem, and (pardon me from this seeming deviation from the language of friendship) admire equally with yourself. It is indeed, and has long been, my settled persuasion, that of all men known to me, I could not justly equal any one to you, combining in one view powers of intellect, and the steady moral exertion of them to the production of direct and indirect good ; and if I give you pain, my heart bears witness that I inflicted a greater on myself,—nor should have written such words [alluding to expression of feeling respecting himself in the opening portion of the letter], if the chief feeling that mixed with and followed them, had not been that of shame and self-reproach, for having profited neither by your general example,

nor your frequent and immediate incentives. Neither would I have oppressed you at all with this melancholy statement, but that for some days past, I have found myself so much better in body and mind, as to cheer me at times with the thought that this most morbid and oppressive weight is gradually lifting up, and my will acquiring some degree of strength and power of reaction.

* * * *

I have, however, received such manifest benefit from horse exercise, and gradual abandonment of fermented and total abstinence from spirituous liquors, and by being alone with Poole, and the renewal of old times, by wandering about among my dear old walks of Quantock and Alfoxden, that I have seriously set about composition, with a view to ascertain whether I can conscientiously undertake what I so very much wish, a series of Lectures at the Royal Institution. I trust, I need not assure you, how much I feel your kindness, and let me add, that I consider the application as an act of great and unmerited condescension on the part of the managers as may have consented to it. After having discussed the subject with Poole, he entirely agrees with me, that the former plan suggested by me is invidious in itself, unless I disguised my real opinions; as far as I should deliver my sentiments respecting the *arts*, would require references and illustrations not suitable to a public lecture room; and, finally, that I ought not to reckon upon spirits enough to seek about for books of Italian prints, &c. And that after all the general and most philosophical principles, I might naturally introduce into lectures on a more confined plan—namely, the principles of poetry, conveyed and illustrated in a series of lectures. 1. On the genius and writings of Shakespeare, relatively to his predecessors and contemporaries, so as to determine not only his merits and defects, and the proportion that each must bear to the whole, but what of his merits and defects belong to his age, as being found in contemporaries of genius, and what belonged to him-

self. 2. On Spenser, including the metrical romances, and Chaucer, though the character of the latter as a manner-painter, I shall have so far anticipated in distinguishing it from, and comparing it with, Shakespeare. 3. Milton. 4. Dryden and Pope, including the origin and after history of poetry of witty logic. 5. On Modern Poetry, and its characteristics, with no introduction of any particular names. In the course of these I shall have said all I know, the whole result of many years' continued reflection on the subjects of taste, imagination, fancy, passion, the source of our pleasures in the fine arts, in the *antithetical* balance-loving nature of man, and the connexion of such pleasures with moral excellence. The advantage of this plan to myself is—that I have all my materials ready, and can rapidly reduce them into form (for this is my solemn determination, not to give a single lecture till I have in fair writing at least one half of the whole course), for as to trusting anything to immediate effect, I shrink from it as from guilt, and guilt in me it would be.

In short, I should have no objection at once to pledge myself to the immediate preparation of these lectures, but that I am so surrounded by embarrassments.

* * * *

For God's sake enter into my true motive for this wearing detail: it would torture me if it had any other effect than to impress on you my desire and hope to accord with your plan, and my incapability of making any final promise till the end of this month.

S. T. COLERIDGE.

From the Same.

Grasmere, Kendal, Wednesday, December, 1808.

My dear Davy— My health and spirits are improved beyond my boldest hopes. A very painful effort of moral courage has been remunerated by tranquillity—by

ease from the sting of self-disapprobation. I have done more for the last ten weeks than I had done for three years before. Among other things, I wrote what the few persons who saw it thought a spirited and close reasoned letter to Mr. Jeffery, respecting the introductory paragraph of the Edinburgh Review of your paper; but I was earnestly dissuaded from sending it, as from an act of undeserved respect—as from too great a condescension even on my part; and secondly (and which was of more weight with me), as an act involving you more or less, whatever I might say, and likely to be attributed to your instigation, direct or indirect, as it is not unknown that I have been on terms of intimacy with you. Yet I own I should be sorry to have it lost, as I think it is the most eloquent and manly composition I ever produced. If you think it worth the postage, it shall be transcribed, and I will send you the original. The passage in question was the grossest and most disgusting *kick-up* of envy that has deformed even the E. R. Had the author had the truth before his eyes, and purposely written in diametrical opposition, he could not have succeeded better. It is high time that the spear of Ithurial should touch the toad at the ear of the public.

I would willingly inform you of my chance of success in obtaining a sufficient number of subscribers, so as to justify me prudentially in commencing the work [The Friend], but I do not at present possess grounds even for a sane conjecture. It will depend in a great measure on the zeal of my friends, on which I confess, not without remorse, I have more often cast water than oil. Here a conceit about the Greek fire might come in, but the simile is somewhat *tritical*.

Wordsworth has nearly finished a series of masterly essays on our late and present relations to Portugal and Spain.¹ Southey is sending to the press his History of Brazil, and at

¹ Which it is to be hoped will be published: one of them is already well known, that on the Convention of Cintra.

the same time (the indefatigable !) composing a defence of religious missions to the East, &c. Excepting the introduction (which, however, I have heard highly praised, but myself think it shallow, flippant, and ipse dixitish), I have read few books with such deep interest as the Chronicle of the Cid. The whole scene in the Cortes is superior to any equal part of any epic poem, save the Paradise Lost—*me saltem judice*. The deep glowing, yet ever self-controlled passion of the Cid—his austere dignity, so finely harmonizing with his pride of loyal humility—the address to his swords, and the burst of contemptuous rage in his final charge and address to the Infantes of Carrion, and his immediate recall of his mind—are beyond all ordinary praises. It delights me to be able to speak thus of a work of Southey's ! I am so often forced to quarrel with his want of judgment and his unthinkingness—which, Heaven knows, I never do without pain, and the vexation of a disappointed wish. But I am encroaching on time more valuable than my own, and I, too, have enough to do. May God grant you health and the continuance of your intellectual vigour !

S. T. COLERIDGE.

From the Same.

Grasmere, Kendal, December 14 [1808].

Dear Davy—The above written copies¹ will explain this second application to you. I understood from Mr. Bernard [afterwards Sir Thomas], as well as from yourself, that Mr. Savage had agreed to print and publish the work on the sole condition that he was to have five per cent. for the publisher, and to charge the printing, &c., at the price charged to the

¹ Copies of Letters from Mr. Savage to Mr. Coleridge, and from the latter to the former, respecting the printing and publishing of "The Friend."

booksellers, or the *trade* (as they very ingenuously and truly style their art and mystery). To spare me the necessity of troubling Mr. Bernard with a fresh letter, I entreat you to transmit this to him as soon as possible. There is but one part of Mr. Savage's letter that I can permit myself to comment upon, that of the propriety of pricing the essay at sixpence, and consequently of not having it stamped, nor finely printed, nor on fine paper. For him, and for a work conducted as he would have it conducted, *i. e.*, one, the object of which is to attract as many purchasers as possible, this might answer. My purposes are widely different. I do not write in this work for the *multitude*, but for those who, by rank or fortune, or official situation, or talents and habits of reflection, are to *influence* the multitude. I write to found true principles, to oppose false principles in criticism, legislation, philosophy, morals, and international law. As giving me an opportunity of explaining myself, I say Cobbett sells his weekly sheet for tenpence. Now this differs from mine in two points, mainly: First, he applies himself to the passions that are gratified by curiosity, and sharp, often calumnious, personality; by the events and political topics of the day, and the names of notorious contemporaries. Now, from all these I abstain altogether—nay, to strangle this vicious temper of mind, by directing the interest to the nobler germs in human nature, is my express and paramount object. But of English readers three-fourths are led to purchase periodical works in the expectation of gratifying these passions—even periodical works professedly literary, of which the keen interest excited by the Edinburgh Review, and its wide circulation, yield a proof as striking as it is dishonourable to the moral taste of the present public—all these readers I give up all claim to. Secondly, Cobbett himself rarely writes more than a third of the weekly journal; the remainder of the sheet is either mere reprinting or stupid make-weights from correspondents (with few exceptions) of the very lowest order. And what are his own com-

positions? The undigested passionate monologues of a man of robust natural understanding, but one unenriched by various knowledge, undisciplined by a comprehensive philosophy; under the warping influence of rooted habits of opposing and attacking, and from this state of mind fruitful in thoughts which a purer taste would have rejected so long, that they would cease to occur, and promiscuous in the adoption of whatever such a state of mind suggests to him of these thoughts furnished by the occurrences of the day. Indeed, more often than otherwise his letters, &c., are mere comments on large *extracts* from the morning papers, such as a passionate man would talk at breakfast over a newspaper supporting the political party which he hated. No *one* thesis is proposed—there is no orderly origination, development, and conclusion; in short, none of those qualities which constitute the *nicety* and *effort* of composition. But *I* (and if I do not, my work will be dropped and abandoned)—I bring the results of a life of intense study and unremitted meditation, of toil and personal travels, and great unrepaid expense. Those to whom these reasons would not justify me in selling the work (stamped as Cobbett's) for that part of twopence more which remains when the additional cost of finer paper and printing is deducted, I neither expect or wish to have among my subscribers. It is scarcely necessary to remark, that in pointing out these differences I had no intention of depreciating the political journal (the style and contents of the work are perfectly well suited to the purpose of the writer). The labourer's pocket knife was one excellently adapted to the cutting of bread and cheese, but it would be unfair to demand that the medical cutler A. should sell his case of lancets at the same price that the common cutler B. sells an equal weight of the bread-and-cheese knives, supposing them both equally good of their kind. This letter from Mr. Savage, added to his long delay in answering me at all, has a good deal perplexed my proceedings, but it shall not make me abandon my intention.

If anything new have occurred in chemistry from your own labours, or those of others, it would be deeply gratifying to me to be informed of it by you ; for hitherto I have not been able to afford to take in any philosophical journal, or, indeed, any other. I was told by a friend that William Allen had proved that oxygen was absorbed in the lungs, but that its action consisted in carrying off the carbon from the blood—consequently that the old hypothesis of refrigeration was not altogether false. But my communicant was no chemist, and his account was so confused, that I am not sure that I have given an accurate statement of it.

My health and spirits are far better than I had dared hope, only from neglect of exercise I remain more corpulent than I ought, though I drink nothing but table-beer, and eat very moderately. When I was in London I was shocked at the alteration in our friend Tobin's looks and appearance. Those who always interpret two coincidents into cause and effect would surmise that marriage has been less conducive to his health than to his moral comfort. It would give me serious pleasure to have a more cheerful account of him.

As soon as I have a little leisure I shall send my Greek accidence and vocabulary of terminations to the press with my Greek-English Lexicon, which will be followed by a Greek philosophical grammar. Heaven preserve and keep you !

S. T. COLERIDGE.

To the Same.

December 27, 1808.

Alas ! poor Beddoes is dead ! He died on Christmas eve. He wrote to me two letters, on two successive days, 22nd and 23rd. From the first, which was full of affection and new feeling, I anticipated his state. He is gone at the moment when his

mind was purified and exalted for noble affections and great works.

My heart is heavy. I would talk to you of your own plans, which I shall endeavour in every way to promote; I would talk to you of my own labours, which have been incessant since I saw you, and not without result; but I am interrupted by very melancholy feelings, which, when you see this, I know you will partake of.

Ever, my dear Coleridge,

Very affectionately yours,

H. DAVY.

From the Same.

Grasmere, Kendal, Monday morning, January 30, 1809.

My dear Davy—I was deeply affected by the passage in your letter respecting Dr. Beddoes. It was indeed the echo of my own experience. The intelligence of his departure from among us, came upon me abruptly and unexpectedly. I was sitting down to dinner, having quitted an unfinished sheet, which I had been writing, in answer to a long and affectionate letter from the Doctor. There was indeed a depth and a flow of feeling in it, which filled me with bodings, but I had no thought that the event was so near at hand. The note, therefore, sent from one of his patients, who had placed himself at Clifton by mine and Wordsworth's advice, (written) the day after his decease, struck me like a bodily blow, and was followed by a long and convulsive weeping, with scarce any inward suffering: but when some half hour after I recovered myself, and my tears flowed slowly, and with grief more worthy of the cause, I felt that more hope had been taken out of my life by this than by any former event. For Beddoes was good and beneficent to all men; but to me he had always been kind and affectionate, and latterly I had become attached to him by

a personal tenderness. The death of Mr. Thomas Wedgwood pulled hard at my heart ; I am sure no week of my life—almost I might have said scarce a day, in which I have not been made either sad or thoughtful by the recollection.¹ But

¹ Independent of ordinary motives of regard, Coleridge was very much indebted to this noble-minded and generous man and his worthy brother, Josiah, for his literary leisure. An annuity of £150 a year offered by them in 1798, and accepted, turned him aside from becoming “a beguiled” Unitarian minister at Shrewsbury. It was his wish, he states in a letter, to have dedicated to the Wedgwoods, one of the great works that he contemplated in “un anxious seclusion ;” assigning, as a reason, that “the public will have owed the work to them who gave me the power of that un anxious seclusion,”—unfortunately so little enjoyed, so little used. Of the annuity referred to, one portion, that from Mr. Thomas Wedgwood, was settled on him for life by his will. (See Cottle’s Reminiscences of Coleridge and Southey, pp. 179, 376.)

In the first volume of *The Friend*, p. 248, Coleridge gives a sketch of the character of Mr. Thomas Wedgwood, in words bearing the impress of truth, of love, and of admiration for qualities of heart and head of the highest order, and so written as to insure the sympathy of the reader. I am tempted to transcribe it, it being in perfect accordance with all I have heard of this remarkable man. Coleridge playfully introduces it thus :—“A lady once asked me if I believed in ghosts and apparitions. I answered with truth and simplicity, ‘No, madam ! I have seen far too many myself.’ I have indeed a whole memorandum book filled with records of these phenomena ; many of them interesting as facts and data for psychology, and affording some valuable materials for a theory of perception and its dependence on the memory and imagination. ‘In omnem actum perceptionis imaginatio influit efficienter.’ (Wolfe.) But he* is no more, who would have realized this idea ; who had already established the foundations and the law of the theory ; and for whom I had so often found a pleasure and a comfort, even during the wretched and restless nights of sickness in watching and instantly recording those experiences of the world within, as of the ‘*Semina naturæ, quæ fit et facit, et creat et creatur !*’—He is gone, my friend ! my munificent copatron, and not less the benefactor of my intellect ! He, who beyond all other men known to me, added a fine and ever wakeful sense of

* Thomas Wedgwood.

Dr. Beddoes's death has pulled yet harder, probably because it came second—likewise, too, perhaps that I had been in the

beauty to the most patient accuracy in experimental philosophy, and the profounder researches of metaphysical science; he who united all the play and spring of fancy with the subtlest discrimination and an inconceivable judgment, and who controlled an almost painful exquisiteness of taste by a warmth of heart, which in the practical relations of life made allowance for faults as quick as the moral taste detected them; a warmth of heart, which was indeed noble and prominent, for, alas! the genial feelings of health contributed no spark towards it!—of these qualities I may speak, for they belong to all mankind. The higher virtues, that were blessings to his friends, and the still higher, that resided in and for his own soul, are themes for the energies of solitude, for the awfulness of prayer! Virtues exercised in the barrenness and desolation of his animal being; while he thirsted with the full stream at his lips, and yet with unwearied goodness poured out to all around him, like the master of a feast among his kindred in the day of his own gladness! Were it but for the remembrance of him alone, and of his lot here below, the disbelief of a future state would sadden the earth around me, and blight the very grass in the field."

The disease which this admirable man laboured under, ending in death—he died in 1805, July 10; he was born in 1771, May 14)—was of a very obscure and chronic kind, and attended with much bodily suffering, even from its commencement. In a memoir of Mr. Coleridge, by the Author of "The English Opium Eater," there is mention made of it—a mention, in some things, not quite correct, as I have learnt from the family, such as an extreme "everlasting restlessness," and his "opening for a time a butcher's shop," as a remedial means;—this last an error arising perhaps from the circumstance that he had been recommended by Dr. Beddoes to take lodgings *over* a butcher's shop, his physician thinking that a healthy situation.

In "The Excursion," book vii., "The Churchyard amongst the Mountains continued," is an animated account of the life and death of a young volunteer, one of a company of eighty men, which, when England was threatened with a French invasion, was formed in the Lake District, and was named "Wedgwood's Mountaineers," having by him in a generous spirit of patriotism been clothed and armed, and this in the completest manner, as riflemen. The sum expended amounted to about £800 in-

habit of connecting such oppression of despondency with my love of him. There are two things which I exceedingly wished, and in both have been disappointed: to have written the Life and prepared the Psychological Remains of my revered friend and benefactor, T. W.: and to have been intrusted with the Biography, &c., of Dr. B. This latter work (Southey informs me) was first offered to you, and then to Mr. Giddy, and is finally devolved on Dr. Stock. As my heart bears me full witness with what unalloyed satisfaction I should have seen this last duty in your hands or in D. Giddy's, so I feel myself permitted to avow the pain, yea, the sense of shame, with which I contemplate Dr. Stock as the performant. I could not help assenting to Southey's remark, that the proper vignette for the work would be a funeral lamp beside an urn, and Dr. Stock in the act of placing an extinguisher on it. . . .

I have just read a brief account of your first lecture of this season, and, though I did not see as clearly as I could wish, the pertinence of the religious declaration quoted from you, and am not quite at ease (especially when I think of Darwin), when I find theosophy mingled with science, and though I wished to have been with you to have expressed my doubts

cluding pay for twenty days' exercise to each man, which he gave them so long as they were supernumeraries. This company, composed of stalwart dalesmen, under the command of his friend Captain Luff, was the very elite of the volunteer corps. In describing the high qualities, intellectual and moral, of the young soldier, the poet, I cannot but think, had in his mind the memory of the man whose name was so properly associated with the company,—idealizing according to his wont,—selecting such qualities as suited his purpose. That he had a vivid impression of him is certain, as well as a high regard. In a letter written in 1806, Mr. Wordsworth says, "His calm and dignified manner, united with his tall person and beautiful face, produced in me an impression of sublimity beyond what I ever experienced from the appearance of any other human being."

concerning the accuracy of your comparison between the great discoverers of science and the Miltons, Spinozas, and Rafaels; yet the intervening history (it is only that I am writing to you that I stopped and hesitate in using the word) overwhelmed me, and I dare avow, furnished to my understanding and conscience proofs more convincing than the dim analogies of natural organization to human mechanism, both of the Supreme Reason, as super-essential to the world of the senses; of an analogous mind in man not resulting from its perishable machine, nor even from the general spirit of life, its inclosed steam or perfluent water-force; and of the moral connexion between the finite and the infinite Reason, and the awful majesty of the former, as both the revelation and the exponent voice of the latter, immortal timepiece, an eternal sun. Shame be with me in my death-hour if ever I withhold or fear to pay my first debt of due honour to the truly great man, because it has been my good lot to be his contemporary, or my happiness to have known, esteemed, and loved, as well as admired him.

It is impossible to pass otherwise than abruptly to my own affairs. I had from the very first informed Mr. Savage¹ that I would not undertake the work at all, except I could secure him from all possible risk. His proposals were such, that had I acceded to them, after years of toil, I should have been his debtor and slave, without having received a farthing—or, to use the strong, coarse illustration of a friend, a man of consummate good sense and knowledge of the world, and of twenty years' experience in periodical works—"Savage's proposals would have led you into a gulph of debt or obligation: you would have been like a girl who gets into a house of ill-fame, and whom the old bawd always keeps in debt, stripping her of every shilling she gets for prostitution." What my

¹ The printer with whom he had been negotiating respecting the bringing out of "The Friend."

error was, after my *first* conversation with Mr. S. I know, but shall not say: but his mistake has been in construing my indifference as to pecuniary matters, and *apparent* ignorance of business, into absolute silliness and passive idiocy. But this is passed. As soon as I received his letter I made up my mind to another mode of publication. "The Friend" will be printed as a newspaper, *i.e.*, not in form or matter, but under the act of parliament, and with its privilege, printed at Kendal, and sent to each subscriber by the post.

My health is more regular; yet, spite of severe attention to my diet, &c., my sufferings are at times heavy. Please to make my best respects to Mr. Bernard.

May God bless you!

S. T. COLERIDGE.

The following letter, from its interesting contents relating to Coleridge and my brother, I am tempted to insert as a pendant to their correspondence. It is addressed to the same revered lady as the letter of Southey, before given, and was written about the same time. The words with which it opens, remind me of an expression of its distinguished author, uttered when speaking of Dr. Paris's work—his Life of Sir H. Davy—that its tone was not "*gentlemanly*," and "that *justice* had not been done in it to the character of his friend." This was said in the winter of 1831, when an invalid in Malta. In the same conversation, speaking of the distinction my brother had attained, in his amiable way he added, "I hope, Dr. Davy, your mother lived to see it; it must have been a *great* pleasure to her."

To Mrs. Fletcher.

Edinburgh, December 18.

Madam—I am extremely glad to learn that Dr. Davy purposes to set about the important duty of giving the world some account of his talented brother. I regret extremely, that as our pursuits were different, we never corresponded, though we were long friends, and the marriage with Mrs. Apreece (whom I have the honour to call cousin after the fashion of my country) increased considerable intimacy, so that I was very often, when chance made us residents in the same place, in Sir Humphry's society, and had often the pleasure of seeing him here.

It might be interesting to Dr. Davy to know, that in a singular scene described by Mr. Coleridge in his *Sibylline Leaves*, p. 89,¹ Sir Humphry was described as “the individual who would have established himself in the first rank of England's living poets, if the genius of our country had not decreed that he should rather be the first in the first rank of its philosophers and scientific benefactors.” The compliment I can witness to be as just as it is handsomely recorded. I was in company at the same time, the house being that of our mutual friend, Mr. William Sotheby; indeed, I was the person who first mentioned the verses which introduced the discussion. As Sir Humphry's distinguished talents for literature were less known than his philosophical powers, perhaps Dr. Davy might wish to preserve this attestation by so eminent a judge as Mr. Coleridge. I have myself heard my deceased friend repeat poetry of the highest order of composition.

WALTER SCOTT.

¹ In later editions it occurs, *ad finem*, under the title of “Apologetic Preface to ‘Fire, Famine, and Slaughter.’”

The following letter from my brother to his old friend Mr. Cottle, written in June, 1823, will show that though Coleridge and he had ceased to correspond, yet, when they met, they met as friends.

My dear Sir— . . . I have often thought on the subject of the early history of our planet, and have some peculiar views, but I have some reserve in talking here about it, as all our knowledge on such matter is little more than ignorance.

What I stated to the Royal Society, in awarding the medal to Professor Buckland, has not been correctly given in the journals. I merely said that the facts lately brought forward, proved the occurrence of that great catastrophe which had been recorded in sacred and profane history, and of which traditions were current even amongst the most barbarous nations. I do not say they proved the truth of the Mosaic account of the deluge, that is to say of the history of the Ark of Noah, and the preservation of animal life. This is a revelation; and no facts, that I know of, have been discovered in science that bear upon this question and the sacred history of the race of Shem. My idea was to give to Cæsar, &c., &c., and not to blend divine truths with the fancies of men.

I met Coleridge this morning, looking very well. I had not seen him for years. He has promised to dine with me on Monday.¹

Very sincerely yours,

H. DAVY.

The extracts which follow are very miscellaneous, and have been selected chiefly from note-books of recent acquisition.

¹ This letter is from Cottle's Reminiscences.

The first I shall give is from a note-book commenced probably at Bristol, and continued in use for some time after his being in London:—

“ On looking into this book [it opens with metaphysical observations relating to existence] after at least three years and a quarter, now 1805, February, what an alteration do I find in my general sentiments, and in my power of composition. The metaphysics were amongst my earlier compositions !”

“ The man who labours to produce effect, can never have the highest degree of genius. That polish of style, that smoothness of versification, and that harmony of periods, which demand labour, and labour only, are incompatible with the strong and rapid combinations of *genius*. Restlessness of thought, power superior even to will, ardent, but indefinite hope—these constitute the great elements of that feeling which always has something above the common habits of thought; has been, as it were, supernaturally infused into the mind, or self-born in it,—which though derived from the senses and the feelings, bears very little relation to them—which is, as it were, matter converted into mind, spirit animating thoughts and feelings, embodied in reasoning.”

“ It may be matter of surprise that the influence of philosophical opinion has been so little felt, and has been so transient in its operation; but all astonishment will cease, when it is considered that the truths of science have always been limited to a certain number of individuals, and that they appeal to the reason of men and not to their feelings. However eloquent the language in which they have been delivered, its character must of necessity have been different from that of popular declamation, which relates to objects familiar to all, and to passions which every mind is capable of feeling.

“ The progress of philosophical discussion is like that of the

stream of a cultivated country—it descends pure and clear; it either flows by obstacles, or slowly saps their foundations—it fertilizes and adorns. The course of popular opinion is similar to that of a new made torrent, swollen by rains: it moves rapidly along, overflowing its banks; it carries with it mud and stones, fruits and flowers; its force is irresistible, but of short duration; its effects powerful, but destructive.”

“The men who begin with speculation and end with facts, begin at the wrong end; the firmest materials should be in the foundations; the embellishments should be made after the structure is completed.”

“It is needless for us again to say that in *science* and the *arts* there is a dependence which is the source of their progression and importance. In a well organized country, power is always compound: Archimedes could not have made machines which terrified the Roman soldiers without the assistance of good carpenters and good workers in metal.”

“The opinions which result from passion are as the impressions made by the waves upon the sand; what one tide produces, the next modifies or destroys.”

“The early efforts of early genius—the smoke and bright flame of wood when first kindled—its steady and bright light afterwards.”

“Gibbon may be compared to the manufacturer who collects the wool that the sheep—the historians whom he quotes—had borne, and converts it into a garment, and dyes it purple, red, and yellow.”

At no period of his life did he entirely forsake the Muses; but at this time, judging from what remains, he but rarely courted them in verse. In the Memoir of his Life a few examples will be found. The following—one descriptive of an angling incident,

the other of a grateful feeling for attention—may perhaps be allowed a place here :

To Mrs. Trevor.

At Bromham, the seat of the Rt. Hon. John Trevor,¹ 1804.

He lives in gladness, he who might have died
Plunged in the Ouse's fair and tranquil stream :
And, had he fallen a victim to the tide,
What had he lost, save life's short feverish dream ?

But those whose kindness oft had cheered his soul,
The memory of whose virtues filled his breast,
Had for a moment mourned his hapless fall,
And in his island grave had bid him rest.

There the wild willow on his tomb had spread
Its slender leaves and flowers of silver green,
The meadow grass had clothed his dewy bed,
And there the scented wild rose had been seen.

There had the skylark at the break of day
Thrown his wild wood-notes on the fragrant breeze ;
The nightingale had tuned his love-lorn lay,
While the bright moonbeam trembled through the trees.

And oft his peaceful spirit would have dwelt
Amidst those halls to social converse dear,
The charm of long remembrance would have felt
Glad in your joy, and gloomy in your care.

¹ In a note, he is called the last of the Hamdens. From a sentence begun, not finished, it may be inferred that these lines were written on the occasion of a congratulation after a fall into the river when angling, Mrs. Trevor adding, "Had you been drowned, you should have been buried in the islet."

Whoever, glowing with the holy love
Of wild magnificence, of ample form,
Has visited these islands, where, upraised
Above the vast Atlantic, boldly stand
The giant monuments of olden time,
The pillar'd caves of Staffa, and the rocks
Of fair Iona, let him kindly bless
That peaceful and that hospitable shore,
Where stands the house of Ulva:¹ for its halls
Are graced by virtue, elegance, and taste,
By social joy and welcome from the heart.
With them the weary traveller finds repose,
And quits them with regret and gratitude.

¹ An island close to the west coast of Mull, at the time of my brother's visit the residence of the proprietor, Clanronald (Macdonald of Clanronald).

CHAPTER IV.

FROM HIS DANGEROUS ILLNESS IN 1807, AFTER THE DISCOVERY OF THE BASES OF THE FIXED ALKALIES, TO HIS LEAVING THE ROYAL INSTITUTION ON HIS MARRIAGE IN 1812.

THE period we are now entering upon was, perhaps, the most interesting of my brother's life, and in relation to discovery and the extension of chemical science, the most important. The metals of the alkalies, isolated by means of the energetic decomposing power of the Voltaic pile, became in their turn powerful agents of analysis. He employed them with unwearied industry, and shortly by their action afforded evidence demonstrative that the earths, like the alkalies, are compound bodies, formed of metals in union with oxygen, and that boracic acid is compounded, and contains an inflammable basis. Extending his inquiries in the bold spirit of original research, he soon obtained proof that muriatic acid is also compounded, and oxymuriatic acid gas a simple substance, reversing thus the then received opinion, and in so doing overthrowing what had been considered an established doctrine, viz., that oxygen is the sole acidifying principle, and

introducing larger, less restricted views of chemical combination, of chemical products and properties—alkalescence being, as it would appear, as well as acidity, a result of union with oxygen.

In a former chapter I have said that the discovery of the metallic bases of the fixed alkalies was an era in the history of chemistry, and that it effected a revolution in the science. So it surely did, as those who witnessed it must have felt, but as those who did not, who have entered on the study since the event, can hardly appreciate. How anomalous were these metals, lighter than water ! Before their discovery, ponderosity in a high degree had been associated with metallic bodies, and so strong was the association, that a chemist, and he a veteran chemist, handling a piece of potassium for the first time, exclaimed: "It is ponderous!" Moreover, not only was it lighter than water, but it instantly decomposed water on coming in contact with it, producing combustion with flame, the hydrogen of the water becoming ignited by the heat evolved in the act of union of its oxygen with the metal, and, simultaneously, the conversion of an insoluble metal into a very soluble and caustic alkali. The extraordinary is the parent of doubt, and doubt of opposition. These extraordinary properties led to the questioning of the character of the metals of the alkalies. By some they were called metalloids; by some their simple nature was objected to. They were considered compounds—by one party as compounds of the alkalies and carbon, by another as compounds of the

fixed alkalies and hydrogen. And these questioners and objectors were chemists of mark, principally Gay Lussac and Thenard in France, and Mr. Dalton and Mr. Murray at home. Much controversy arose, and was extended to muriatic and oxymuriatic acid as soon as the new views respecting these bodies were enunciated. This controversy, now almost forgotten, was in itself useful, imparting as it did a keen interest to the subject, and producing further research and new discoveries—these all of a confirmatory kind. The details are to be found in the scientific journals of the day, such as Nicholson's Journal and Tilloch's Magazine, and in that great record of British science, the Philosophical Transactions—and as regards the French chemists, in the *Memoirs D'Arcueil*, the *Annales de Chemie*, and in a distinct volume embodying the researches of MM. Gay Lussac and Thenard. The great facts in chemistry which the science owed to this conflict of opinions and extended researches, with the doctrines they established, are described and systematically arranged in the *Elements of Chemical Philosophy*, the first volume, published by my brother in 1812; respecting which a very competent judge, the late Dr. Young, stated in reviewing it, that "the researches on which it was based were more splendidly successful than any which have ever before illustrated the physical sciences in any of their departments," not even excepting the optics of Newton.¹ In this work will be found his views on

¹ Quarterly Review, No. XV.

the combinations of bodies in definite proportions, in accordance with Dalton's atomic doctrine. It has been said that he was averse to that doctrine and opposed it, and never, except reluctantly, adopted it. This is not just to him. The doctrine of definite proportions he advocated early; this he considered the important part of Dalton's views—that of atoms he held to be hypothetical, and as such open to question. He and Dalton were always on the most friendly terms; no jealousy or unkindly feeling ever arose between them. Dalton dedicated to him and to Dr. Henry the second part of his *System of Chemical Philosophy*; his words are: "As a testimony of their distinguished merit in the promotion of Chemical Science, and as an acknowledgment of their friendly communications and assistance;" and it was under the presidentship of my brother that the first royal medal was awarded to him.

In the heading of this chapter, a dangerous illness which he experienced is intimated; I must not pass it by altogether unnoticed. It occurred in the early winter of 1807, following hard on the discovery of the bases of the fixed alkalies. So dangerous was the fever under which he laboured, that his life was almost despaired of. It was said at the time,—

"Death his dart
Shook, but delayed to strike."

An account of it, and of the extraordinary solicitude it excited, marking his popularity, will be found

in his Memoirs. His belief was that he contracted the disease in visiting Newgate, for the purpose of endeavouring to improve the ventilation and sanitary state of that great and then foul prison.

What I have to offer of his correspondence during this period is "a mingled yarn," but its threads are all of a bright colour. The subjects of the letters are nearly as various in their character as the persons concerned, ranging from matters of science to matters of the affections, and sometimes blending the two.

The first I shall give are some of those which have been preserved with a kindly care, to his old attached and respected friend, Mr. Knight, so distinguished for his researches in vegetable physiology. I am tempted to preface them with the following from his pen—*laudari ab laudato viro*, is something more than a compliment:

"My late lamented friend, Sir Humphry Davy, usually paid me a visit in the autumn, when he chiefly amused himself in angling for grayling, a fish which he appeared to take great pleasure in catching. He seemed to enjoy the repose and comparative solitude of this place,¹ where he met but few persons, except those of our own family, for we usually saw but little company. He always assured me that he passed his visits agreeably, and I have reason to believe he expressed his real feelings. In the familiar conversations of those friendly visits, he always appeared to me a much more extraordinary being than even his writings and vast discoveries would have

¹ Downton Castle, on the Teme.

led me to suppose him; and in the extent of intellectual powers I shall ever think he lived and died without an equal."

Their acquaintance, I may add, began in the spring of 1803, when he was preparing his lectures on agricultural chemistry—the first course, which was entitled, "On the connection of Chemistry with Vegetable Physiology." They were introduced to each other by Sir Joseph Banks. At this time Mr. Knight was residing at Elton, near Ludlow; and it was there my brother first visited him, in company with Mr. Greenough, on their way to Ireland, in 1805. Mrs. Stackhouse Acton, who has given me this information, speaks in the letter affording it, "of the surprise everybody expressed at the youthful appearance of one whose scientific fame had been so widely spread; though," as she observes, "I was too young at that time to remember much, except his appearance and his good-nature to us as children." She further remarks, in accordance with the statement of her father just given, alluding to this and his after visits, both at Elton and Downton (at Downton Castle, after February, 1808, when Mr. Knight removed there), that her "father, to the end of his life, spoke of them as affording him many of the pleasantest days he had ever passed; and," she says, "I am sure there were none to which he so frequently referred with a melancholy satisfaction when they had ceased."

To T. A. Knight, Esq.

Royal Institution, August 25, 1808.

My dear Sir—I have just sent your excellent paper on the function of the alburnum to the press.¹ Do you wish for any extra copies?

Our society will expect with anxiety a continuation of your important researches, and I trust we shall have a paper from you at the beginning of the next session.

I shall ask permission to witness the results of some of your experiments in the course of the next month. I think of leaving London for a fortnight, and there is no place that I have so great a desire to visit as your delightful scenery. The hope of the pleasure of your society, the banks of the Teme, and the grayling fishery, are an assemblage of temptations which will induce me to bend my course towards Herefordshire.

Two philosophical friends, Mr. Children and Mr. Pepys, have proposed to be my companions in this little journey, and we propose to establish our quarters for a few days at Leominster and Leintwardine, from which last place I shall have the opportunity of paying you a visit, and I hope you will permit us all to join in a fly-fishing party. We think of being at Leintwardine about the 10th or 12th of September. Would you have the kindness to suffer one of your servants to engage the beds and large sitting-room for us at that time; or if they are already claimed for that time, to inquire when they will be disengaged. I take this precaution lest we should meet General and Mrs. Tarleton and family there, in which case there would be no accommodation for us.

I have been much engaged in experiments since I had the

¹ As junior secretary of the Royal Society (Dr. Wollaston was then the senior), it was one of his duties to superintend the printing of the Philosophical Transactions.

pleasure of seeing you, and I have succeeded in decomposing all the earths, which turn out to be highly combustible metals united to oxygen.

I am, my dear sir, with respectful compliments to Mrs. Knight,

Very sincerely your obliged,

H. DAVY.

To the Same.

April 30.

My dear Sir—Having had the pleasure of meeting your brother¹ yesterday, he was so good as to say he would take charge of a small parcel.

I shall inclose some seeds from the northern climates, which I conceive you may like to examine the produce of. They may be useful in your kitchen garden. They are a present from General Bentham, who is himself a horticulturist, and a great admirer (in common with all men who understand the subject) of your investigations in vegetable physiology. He is anxious to try a few of your peas, and could you spare him a dozen or two, would esteem it as a great favour.

I have lately seen a Mr. Campbell, from Edinburgh, who has entered into some speculations on your experiments on the effects of gravitation on trees. He has an idea that the *relative* gravity of different materials of the sap may influence the growth in a perpendicular direction. This, however, I conceive would be comprehended in your general proposition.

Soon after you left me on the Saturday morning at the Teme, I saw a pike of three or four pounds in the deep pool above the Black Bridge. I attempted to hook him, but in

¹ Richard Payne Knight, Esq., "distinguished for his taste, for his knowledge of classical literature and antiquities."—*Rose's Biographical Dictionary*.

vain. I think it right to give this notice of the *destroyer*, to whom I wish—as well as to all other tyrants—a short life.

The memory of the Teme, of Downton, and of all its delightful accompaniments, I feel at this moment highly refreshing in the noise, bustle, and business of London.

With best compliments to Mrs. and Miss Knight, I am,
my dear sir,

Your sincerely obliged,

H. DAVY.

To the Same.

December 31.

My dear Sir—When I had the pleasure of being with you, you talked of breeding and feeding trout. The manuscript on the other pages is from the Hanover Magazine of nearly a century ago.¹ I doubt not the method is a good one, and would apply likewise to graylings. With the idea that it might interest you, I have had it copied. I shall send you the flies and hooks before the season commences. The gamekeeper was so good as to say he would put into your hands for me some wrens' tails and fieldfare's wings; all other feathers we can get in London.

I have been busily at work for the last three months, and have succeeded in solving some difficult problems on the nature of sulphur, phosphorus, charcoal, the diamond, the boracic and fluoric acids. All these bodies prove to be compounds.²

¹ By Lieutenant Jacobi. The account is even worthy of being referred to now, especially as regards the quality of the water, the occasional moving of the ova in the process of being hatched, and the protecting them by a fine grating of brass wire—iron rusting—from the attacks of their numerous enemies. An abstract of Jacobi's paper is to be found in Bloch's *Ichthyologie*, vol. i., p. 214.

² As to sulphur, phosphorus, the diamond, his later views, founded on further researches, were somewhat modified, as will appear from after letters.

I hope I shall have the satisfaction of seeing you early in the spring, and of learning some new facts on vegetable physiology.

The journey of September was to me, as well as to my companions, a source of great delight. And we have often spoken with enthusiasm of your valley and its accompaniments, and the moral and intellectual, as well as picturesque treat, that we owed to your and your brother's kindness and hospitality.

With best compliments and thanks to Mrs. and Miss Knight, and your brother, I am, my dear sir,

Your sincerely obliged,

H. DAVY.

I need not say how many, very many, happy New Years I wish you and your family.

To the Same.

March 12, 1809.

My dear Sir—A thousand thanks for your kindness. Your hare was excellent, and the feathers such as I should have found it impossible to procure in any other way.

I shall inclose a few grayling flies and some Irish hooks. You possibly may try them before you leave the country. I think the colours and size will suit the Teme.

I cannot agree with you as to your opinion of the paper you have favoured the Royal Society with. The reasoning is admirable, and I see with great delight that it will be the parent of new facts. In fact, your field, like mine, is inexhaustible, and I trust you will live many years to enlighten the world with more important discoveries in it.

I think of making a little expedition with three or four friends, to the Usk, in the passion week. We shall probably cross the country by Leintwardine, and ask leave to fish for

one day in the Teme. This is uncertain, but if we come it will be in the end of Easter week; but we must go on to Ludlow immediately.

I trust I shall find you in London when I return; I cannot expect to meet you at that time on the river side, though I need not say how happy it would make me if this happened.

I have lately been working at water and the gases, and I have come to a conclusion with which, I think, you will be pleased, namely, that water is the basis of all the gases, and that oxygen, hydrogen, nitrogen, ammonia, nitrous acid, &c., are merely electrical forms of water, which probably, according to the ἀριστον μὲν ὕδωρ, is the only matter without power, and capable, according as it receives power or change in its electricity, of assuming the various forms hitherto considered as elementary.

With best compliments to Mrs. and Miss Knight, I am,
my dear sir,

Your most sincerely obliged,

H. DAVY.

To the Same.

London, April 9, 1810.

My dear Sir—I read a few weeks ago, at the Royal Society, your interesting paper on the probability of the old age of the tree depending upon the imperfection of the functions of the leaf. And the paper strengthened the desire which I expressed to you last year, of seeing some experiments on the action of leaves on air, carried on under your direction.

I think of leaving town on Friday, 13th, on a little party to the head of the Thames, and afterwards to the Wye, and probably shall reach the vale of the Teme in the beginning of Easter week, when I will bring you a little apparatus for

examining gases. As my friends, Warburton and Blake, and I have formed a resolution to lead a wild, uncontrolled, piscatorial life for a fortnight, I hope you will be so good as to give us leave to fish for two or three days in the Teme, and to take up our head-quarters at Leintwardine; and that you will let me run up and down from Leintwardine to Downton without interfering with any of your arrangements or any of your occupations, and that you will let me be your operator in the experiments on leaves.

There is nothing that I look forward to with so much pleasure as a visit to the delightful spot which you inhabit. After having been pent up for a winter in London, and jaded by business and a city life, such a prospect is a prospect of health to the body as well as to the mind. I hope I shall find you, and Mrs. Knight, and Mrs. Bayley, and Miss Knight, and all your family, well.

I hope you will not be angry with me for going to Leintwardine, but my engagement to an Easter fishing party has been constant for the last four years—and by doing this I can keep two engagements, and no one can feel with more warmth and gratitude your kindness and hospitality than I do.

I am, my dear sir, with best respects to Mrs. Knight,
Your truly obliged,

H. DAVY.

To the Same.

August 29, 1809.

My dear Sir—I am this moment going out of town for a few days, to frighten the partridges, with my friends, Children, Warburton, and Pepys, at Tunbridge. I shall be back before the eighth, and trust that I shall have the pleasure of seeing you and Mrs. Knight, and your son, in London. I was much

disappointed that I missed your son at Downton. I shall be very glad to make his acquaintance, and to show him what I can in chemistry that may influence his partiality to the pursuit.

I shall look forward with much delight to the being with you for a few days at Downton, towards the end of the autumn.

You perhaps know before this, that your friend, Sir Joseph Banks, is to dispose of the King's flock of Merino sheep in presents. I hope a part of them will fall to your lot. I mentioned to Sir Joseph (I believe I was right) your partiality for the breed, which he did not seem aware of. If you have not yet written to him on the subject, I hope you will, for of all the improvers in the Kingdom you ought to be first looked to on an occasion of this kind.

With best compliments to Mrs. Knight, I am, my dear Sir,

Very sincerely yours,

H. DAVY.

To the Same.

Cobham, Kent, November 3 [1811].

My dear Sir—I cannot yet profit by the kind permission you have given me to submit my ideas upon vegetable chemistry to your observations and corrections, for I have only just commenced that part of my labour, and I do not hope to be able to get through it till the beginning of the spring. In considering the physiology of the subject, I shall have little to do but to record your labours, for you have *created* almost all the *science* we possess on that interesting subject. My aim will be to throw out some chemical hints upon the nature of vegetable nutrition, the conversion of dead into living matter, &c., which may at least produce new investigations.

I have often, since I quitted Downton, had occasion to

check *feelings* which certainly were *too selfish* to be indulged in for more than a moment. When I have seen a fine day, and the flies sporting in the sunshine, I have sighed and said, What such a day would be worth at Downton! For the first week after I returned I rejoiced when the wind blew from the east. We were unfortunate then in our weather; but to have had a week of fine days, good fishing added to our general stock of pleasures whilst we were with you, would have been above the common balance of human enjoyment, and we might have considered ourselves in the superstitious feeling of the ancients—*nimis fortunati*.

I have been much employed since my return, in pursuing investigations upon the nature of air and water, and their conversion into each other. The inquiry becomes more difficult as it becomes more refined; but I hope to be able to give some decided views upon the subject. Many thanks for the interest you express in my experiments. I am little anxious about speculative opinions, yet I shall omit no explanation that may assist research; facts are what we ought to value, and they must be permanent even amongst the revolutions of opinion. When the weight of the atmosphere was first proved by the Torricellian experiments, the Italian philosopher was abused, and a thousand false explanations of the barometer given by monks and Jesuits: one never hears now of Father Linus's invisible threads of suspension for the mercury: the fact belongs to the immutable in natural philosophy.

I beg to be remembered very respectfully and kindly to Mrs. Knight, and to all the family at Downton. Believe me, your goodness and hospitality have not been thrown away upon an ungrateful man.

I am, my dear Sir, very truly,

Always your obliged,

H. DAVY.

This is almost the first half hour of leisure that I have had since I received your letter. I am here at grass for two or three days, in the midst of fine woods, but without a Teme or a Downton.

To the Same.

Berkeley Square, April 10, 1813.

My dear Sir—Constable, the bookseller at Edinburgh, wishes very much to have a preliminary dissertation to attach to the Edinburgh Encyclopædia. He has induced Dugald Stewart, Mr. Playfair, and myself, to give our assistance in this dissertation, and he is very desirous of having your aid in that part of it which shall give a general view of the progress of vegetable physiology. I told him I would write to you. Supposing you are disposed to give him a few sheets on this subject, he begs you will fix your own terms. He offers thirty guineas a sheet to the other gentlemen concerned.¹

Of course a mere abstract of the philosophy of the subject only would be required, and this no one living can do well but yourself.

I shall give him a short philosophical view of the progress of chemistry.²

¹ This proposal was, as I am informed by Mrs. Stackhouse Acton, declined;—he, as she has mentioned in a note I have been favoured with from her, “Never being fond of binding himself to work that must be done by a given time;” adding, “also I think he disliked the trouble of hunting up matter for an undertaking of the kind, preferring rather to set down his own observations. And, from this cause, I know he has been found fault with for having sometimes given that which had been previously described by others, as original matter—which it was to him.”

² This, his intention, was not carried into effect;—the chemical part alluded to was written, I believe, by Mr. Brande.

I am just publishing my Lectures of Agricultural Chemistry. You will find I have profited throughout by your labours.

Sir Joseph [Banks] is better, but has had a very severe attack of gout, to which he was, as the saying is, a martyr.

With best compliments to Mrs. Knight,

My dear Sir, your very sincerely obliged,

H. DAVY.

I am going to Cornwall in a day or two, and shall return in about a fortnight.

The next letter is to another old friend of his, the late Thomas Allan, Esq., of whose kindness, when I was a student in Edinburgh, I have a grateful recollection. For a copy of it I am indebted to his son, Mr. Robert Allan. The abstract of Lectures alluded to in its beginning, was published in the Caledonian Mercury, of which Mr. Allan was proprietor; but who was better known as a mineralogist, and for the admirable, though small collection of minerals, which he formed: it was purchased after his death by Mr. Greg, of Manchester, in whose possession it now is.

Llanroost, North Wales, October 6, 1811.

My dear Sir—I am much obliged to you for the printed abstract of my Lectures. There are some few matters which I think are not exactly my statements; but I shall be very thankful to you for any remarks upon the subject.

In my next course of geology I shall modify many of the doctrines, and certainly mould the whole somewhat more into a plutonic form. I think you make me more unjust than I conceive I was (certainly more unjust than I intended to be)

to Dr. Hutton, and his enlightened and powerful philosophical defenders. My leaning has always been to fire, even before I discovered the metals of the earths; but I think the agency of water must be likewise introduced to explain the silicious formations (water highly heated under pressure).

In my course through Herefordshire and Shropshire a few days ago, I witnessed some good plutonic facts,—hummocks, and hills of trap and win, rising in the midst of limestone strata, almost vertical near them, and gradually recovering their parallelism towards the remote parts. The Huttonian doctrine, considered as an hypothesis, has many advantages over all the other views; it offers probable explanations of many more phenomena, and presents fewer difficulties; difficulties, however, it still has, and they must be removed before it can be considered as a genuine theory.

With best compliments to Mrs. Allan, I am, my dear Sir,

Your sincerely obliged friend and servant,

H. DAVY.

The letters which follow next are of a kind also requiring some preliminary notice; they are to myself and to my mother. Those to myself, I venture to hope, will be received with indulgence—I mean, as regards myself, for inserting them. I was at the time following my medical studies in the University of Edinburgh, after having spent three years—three delightful years—in the study of Chemistry under him, assisting him in his researches in the laboratory of the Royal Institution. Very flattering are many of the expressions which he uses towards me, incited

by brotherly affection, and knowing well that the voice of praise is one of the strongest incentives to virtue, and that a certain degree of self-respect is one of the best securities against moral degradation. A long interval has occurred between that time and the present—a lapse of nearly half a century, yet, in recurring to these letters, I have almost as strong a feeling of pleasure, tinged, indeed, somewhat with sadness, as when I received them; and I must ever have a grateful sense of the love that prompted them. In giving them, without *now* omitting the laudatory passages, may I hope that I shall not be charged with vanity, being induced so to give them, not merely for the gratification to myself—that not a small one—but to make him in his kindly and generous nature better known. The correspondence commenced between us at this time (the autumn of 1811) was continued uninterruptedly so long as he lived. Most of his letters to me have been preserved, with the exception of such as I had from him during my early service in the medical staff of the army in Flanders, France, and Ceylon, between 1815 and 1820. The first of these letters to me, as is indicated by the date, was from Dublin, immediately after his arrival there, where he had been invited, and it was the second time, to give a course of Lectures at the Royal Dublin Society. These Lectures were on the Elements of Chemical Philosophy and on Geology. The course given in the preceding November was on Electrochemical science. It is stated by Dr. Paris that the

honorarium he received on both occasions was £1,280; the admission receipts of the society amounting to £1,773 7s. 3d.; the difference between the two sums, it may be inferred, having been applied to defray the expenses incurred. The sums I mention in proof of the great attractiveness of his Lectures; and the manner in which they were valued was further shown by the thanks of the Society formally rendered to him. It was at this time that the honorary degree of LL.D. was conferred on him by the Provost and Fellows of Trinity College.

To his Brother.

Dublin, October 15, 1811.

My dear Brother—I am just arrived after a short passage, and have just perused your letter. I shall inclose with this as many letters of introduction as a frank will hold. Mrs. Apreece has written to Mr. Henry Mackenzie's family, which she thinks the one in Edinburgh that will be most agreeable to you. Call and leave your name; you will easily find him. He is the author of "The Man of Feeling."

I should not lay much stress upon the advice of a bad logician. Follow your own bent, or rather take Sir James Hall's or Mr. Playfair's advice.

I have written to Mr. Allan. My letter was sent nearly a fortnight ago. I desired him to introduce you to Sir James Hall.

You must follow your own plans with respect to study. With your talents and powers of application, it would be difficult even for Dr. * * * to make you one of the πολλοί.

Pray do not care about the expense, if it add anything to comfort or the respectability of your situation. If you could board in a respectable family, it would, I think, be best.

I will, if you like, send you £40 a year, in addition to what my mother sends you ; and you may, if you please, consider it a loan, which you shall repay when you are a rich physician, and I am a poor gunpowder merchant.¹

My dear John, let no difficulties alarm you. You may be what you please, trust me—I know what your powers are. Preserve the dignity of your mind, and the purity of your moral conduct. You set sail with a fair wind on the ocean of life. You have great talents and good feelings, and an unbroken and uncorrupted spirit. Move straight forward on to moral and intellectual excellence. Let no example induce you to violate decorum, no ridicule prevent you from guarding against sensuality and vice. Live in such a way that you can always say, the whole world may know what I am doing. I am, my dear John,

Your ever affectionate brother,

H. DAVY.

To the Same.

Dublin, December 1, 1811.

My dear John—I wrote to you about a fortnight ago ; I am told the letters are delivered very irregularly in Edinburgh ; perhaps my letter is still at the post-office.

I have nearly finished my business here. My lectures have been received with the highest interest, and the tone of hospitality and respect towards me is even higher, if possible, than last year.

Pray address your paper as I directed in the last letter. It shall be read immediately after Christmas.

¹ He had been invited by his friend, Mr. Children, to join him in a co-partnership with Mr. Burton in a gunpowder manufactory, which he eventually declined, from, I believe, considerations of the risk, and how trade would interfere with his scientific pursuits.

Brande has made some interesting discoveries respecting the blood. He finds the colouring matter, like other colouring matters, fixable by mordants, &c.

The oxymuriate of magnesia has been applied to bleaching, in consequence of my hints, with perfect success.

Pray address your next letter to me in London. I hope to be there about the 12th. I am, my dear John,

Your very affectionate brother,

H. DAVY.

I have ascertained the presence of vapour in muriatic, fluoric, and fluoboric gases. Pray do you intend to review Gay Lussac and Thenard? You should get introduced to Jeffrey. The chemical part of the Edinburgh Review is vilely conducted.

To the Same.

London, January 7, 1812.

My dear John—I have received your papers¹ safe, and shall read them [at the Royal Society] as soon as there is an opportunity, which will be in a fortnight.

I have my hands full of business. I write this in the House of Lords, where I am watching the progress of a plan for ventilating and warming the House, of which I believe you made a sketch in the spring.

I have not been able to satisfy myself on the grand question respecting water. When hot air is made to discharge electricity at the $+$ side, no oxygen is given off, but hydrogen alone, and *vice versâ*; but it remains to determine whether the platinum forms an oxide or a hydruret.

¹ On a gaseous compound of carbonic oxide and chlorine; on the combination of different metals and chlorine; on different combinations of fluoric acid.

I shall begin my lectures on the 25th.

By a letter from Gilbert of Leipzig, I find that my ideas on chlorine and muriatic acid, have been adopted in Germany. Gilbert has defended them in a thesis on the occasion of his translation from Halle to Leipzig.

Murray's last paper I do not think worth notice.

It will always give me great pleasure to hear from you. I am, my dear brother,

Very sincerely and affectionately yours,

H. DAVY.

To the Same.

February 21, 1812.

My dear John—I have just received and read your paper.¹ The first part I like very much; the second requires, I think, some alteration, and may be made much more conclusive. I quote—"I shall now proceed." All the part after this, which relates to Murray's last paper, should, I think, be re-written. I will tell you why. We have made a great many experiments on combining large quantities of ammonia and muriatic acid gas in exhausted retorts, and have distilled the mixture out of the contact of air, and not the slightest dew or vapour has ever appeared.

Murray's blunder is not knowing that the fine cottony salt formed upon a jar is hygrometrical. We find that it deliquesces; and by successive operations, such as Murray carried on, more than its own weight of water may be procured from it.

Your reasoning is too refined for the subject, and he may cavil at it: whoever tries the experiment out of the contact of the air *will deny* his fact.

¹ On the Nature of Oxymuriatic and Muriatic Acid Gas, in reply to Mr. Murray.—*Nicholson's Journal*, vol. xxxi.

Combine the gases and distil without exposing the results to air, and you will make a conclusive experiment. Do this if possible, and send me the answer, *i.e.*, to his last paper; and leave me to connect it with the first part.

I have a good many new results; some which will surprise you. I shall give them in my next.

I am, your affectionate brother,

H. DAVY.

To the Same.

March, 1812.

Many thanks for your last letter. I have been very miserable; the lady whom I love best of any human being, has been very ill. She is now well, and I am happy.

Mrs. Apreece has consented to marry me, and when this event takes place, I shall not envy kings, princes, or potentates.

Do not fall in love. It is very dangerous!

My case is a fortunate one. I do not believe there exists another being possessed of such high intellectual powers, just views, and refined taste, as the object of my admiration. I am, my dear brother,

Ever most affectionately yours,

H. DAVY.

This last letter may serve as an introduction to the following letters to Mrs. Apreece. They are only a portion of the many addressed to her before their marriage, which had been preserved by her, and since her death have come into my possession, as mentioned in the Preface. These, the selected ones, I shall give in the order as to time in which they

were written, not omitting one or two trivial notes, for the purpose of showing how a casual acquaintance passed into friendship, and friendship into love, arising on each side from sincere admiration: on one hand, that of the lady, of the mental qualities of the man of genius; on the other hand, that of the philosopher, of the charms of an accomplished woman, shining in society, and heightening her attractions by sympathy in his pursuits. Never, I believe, was admiration more genuine of its kind, or more lasting; indeed it continued, it may be inferred, judging from their closing correspondence, to the very last; the letters which will be given will afford proof. Yet, it may with equal certainty be inferred that there was an oversight, if not a delusion, as to the fitness of their union; and that it might have been better for both if they had never met; and, mainly for this reason, that the lady, in spite of all her attractions in mixed society, was not qualified for domestic life, for becoming the *placens uxor*, being without those inestimable endowments which are requisite for it—the agreeable temper, the gentle loving affections which are rarely possessed, which are hardly compatible with an irritable frame and ailing body, such as her's were (for her misfortune) in a remarkable degree. One who, in most things, has so generously sketched the character of my brother—I refer to Professor Forbes, in his admirable dissertation on the Mathematical and Physical Sciences, contributed to the Encyclopædia Britannica—remarks, “Had he been blest with a family, his course would probably have been

evening and happier." I am sure it would have been happier, for he was of a loving disposition, and fond of children, and required the return of love—required (who does not?) to be beloved, to be happy. And here I may remark, that in all the letters I had from him, with the one exception which will be given, there is not the slightest allusion made to his cheerless home; and also that in conversation, whenever he made mention of the subject, it was with the amplest allowance on the score of infirm health, and the irritable state of body and mind resulting.

It is painful to me to make this statement as regards the one; nor would I make it, did I not consider it due to both, and explanatory of much in the marriage life of both, that without it would be unaccountable. To advert to other points. Many qualities she had of a high order, not only fitting her to shine in society, but also to attach friends—but these out of the home circle, such as could come and go, be with her in her healthier, happier hours, and whom she could absent herself from at times when in an opposite state of health and feeling. Her ample fortune, moreover, made her perhaps too independent and self-willed. Amongst her best qualities, was a sense of justice, and a charitable regard for the distressed—especially as shown in her latter years. The money-relief she afforded to the poor, administered by the clergyman of the parish, in which Park Street is situated, was, I am informed, extensive, and, during her life, from whence it came was known only to him. Her powers of mind and attainments, if I

may speak of them, were of no common kind. She had a taste for study, and a facility in acquiring languages; and was not without much poetical feeling. In a volume of poems, edited by Miss Joanna Baillie in 1823, there are some lines of hers with the signature of J. (her christian name was Jane), "To Count —, on the death of his wife," a Polish lady, of great beauty and amiability, whose acquaintance she had formed at Nice—lines displaying the affectionate as well as the poetical sentiment, and how capable she was of appreciating those attentions of kindness, shown by a loving husband, during the last illness of his wife—acts of kindness which she herself, probably, had she been blessed with a sounder organization, would have had pleasure in performing. Fastidiousness of taste was one of her mental characteristics: she courted the aristocracy of rank and talent, and was courted by them. Amongst her friends, she could reckon some of the most distinguished, both at home and abroad—such as Cuvier and Playfair, Sismondi and Hallam, Madame de Staël and Mrs. Somerville, Sidney Smith and Lord Jeffrey, Sir Walter Scott and The Man of Feeling, Mr. Henry Mackenzie,—not to mention the names of many of the higher nobility. Her parties were of the *élite*; and it was considered a privilege to be invited to them. Were her biography to be written, she would appear as a remarkable woman, with many faults and many redeeming qualities, but, taken as a whole, fitted to excite admiration rather than love; and neither by nature happy (equally) in herself or qualified to

impart, in the best sense of the term, happiness to others.

The letters, beginning with the earliest, in the form of brief notes, are the following:—

Mr. Davy regrets that he cannot send Walton to Mrs. Apreece this morning.

He did not recollect that he had lent the book to a friend who lives a little way out of town. He will send honest Isaac to Mrs. Apreece to-morrow or Thursday.

Mrs. Apreece is already of the true faith of the genuine angler, the object of whose art and contemplation is to exalt spirit above matter, to enable the mind to create its own enjoyments, and to find society even in the bosom of Nature.

Mr. Hatchett will accompany me to your door at ten minutes before six. We shall both be proud to be in your train.

I wish you had been on the lake where I fished on Monday. All was still: the sun illumined the whole surface of the water; the water birds were all in motion; a thousand brilliant insects sported in the sunbeams; the fields were beautifully green; the notes of the dove, and the thrush, and the linnet, resounded from the purple beech woods. You would have been enamoured of angling for ever.

I return the ticket. I begin to like the opera from association. The same association would, I think, make me love a desert, and, perhaps, in a long time, might make me an admirer of routs.

To Mrs. Apreece.

Albemarle Street, August 26 [1811].

. . . You write with great eloquence and truth on the effects of mountain scenery on the mind. Whatever exalts

the imagination purifies the affections ; but even our noblest and best thoughts have their archetypes in sensation. The eye is the most perfect of all the senses, and the one that most feeds the intellect. When surrounded by the grand forms of nature, we give to earth something of the indefinite character of heaven. Great objects excite great thoughts ; the standard of our being rises ; all our low and grovelling associations disappear ; and our sympathies are more strongly awakened with regard to the moral, sublime, the excellent, the decorous, and the great in philosophy. We are more fitted to enjoy the blaze of light of Milton, to pass into the proteus-forms of humanity with Shakespeare, and to move through the heavens with Newton.

From the high tone of your mind, I should argue that your health is improving. Were I in possession of the two great secrets of the alchemists, so zealously sought for, you can guess which I would first make use of ; it should not be unemployed for a moment. Could the elixir of life be wafted by a breeze, or created by a thought, it should be yours on the banks of the Wye.

I spent three very pleasant days at Bulstrode. Lord Webb¹ was delightfully philosophical, and the duke and duchess very pleasant and good-natured ; the grounds as beautiful as grounds can be, without a stream or mountain.

I have had a letter from Mrs. Beddoes, and one from George Knox. Both speak of you, both write in a most cheerful tone of themselves. Mrs. B. says : " I do admire Mrs. Apreece ; I think her very pleasing, feel her abilities, and almost believe, if I knew her, I should love her ; I suppose then she would love me."

. . . . I am leading a truly philosophical life of

¹ Lord Webb Seymour, the friend of Playfair and Horner ; a genuine philosopher, in the best sense of the word ; loved by all who knew him, and respected by all.

activity, and the constant pursuit of an object, the elements of such a life. Such moments as I am now passing in the crowded city, prove to me how fitted our being is for independent and solitary thoughts; how much its strength depends upon its own efforts, and how little it owes to general society.

Pray do not forget me, and believe me to be, very truly and affectionately yours,

H. DAVY.

To the Same.

Holyhead, October 14, 1811.

I had hoped to have written to you yesterday from Dublin, but the winds have been unfavourable, and I have been obliged to wait here for three days, with no other objects of interest around me than a stormy sea and barren rocks. Under such circumstances I might have been melancholy and listless, but thoughts and feelings, of which you are the source, and the consolations of science, have kept my mind cheerful and active. I do not admit the truth of the lines of Anacreon, which may be translated,—“It is hard to love, it is hard not to love, but the hardest of all is to be absent from the beloved object.” I should rather say affection is necessary to the moral and intellectual being;—when present, the beloved object is a constant source of happiness; when absent, an eternal spring of hope. It would be easy to show metaphysically that this must be the case. Hope, as Hartley has shown (and the analysis of the passions is, perhaps, the only truly logical part of his book), is reflected pleasure, *i. e.*, it bears the same relation to pleasure that an idea bears to an impression, and consequently the object that has produced most pleasure must be remembered with most delight. I cannot describe to you the gratitude that I feel for the very happy days and hours I have passed in your society. I am convinced with you, that plea-

sure is always useful to a well organised mind. You have refined many of my sentiments, given me more correct principles of taste, and raised very much my opinion of the standard of human excellence, by displaying a character which appeared more exalted the more it was studied. I hope you will not think this acknowledgment of benefits obtrusive; it is one that I ought to make, for I have sometimes said to you that the pleasure I derived from your conversation interfered with my scientific pursuits. I have gained much and lost but little. I have gained sentiments which I trust will continue to exalt and improve my mind, which I am convinced will exist under all circumstances, which in prosperity will be a delight, and which, should adversity be my lot, will be a consolation. All this you will say is romantic, but who would not follow a romance of pleasure? If this is romantic, it is romantic to pursue one object in science, to attach the feelings strongly to any ideas;—it is romantic to love the good, to admire the wise, to quit low and mean things and seek for excellence.

The first two days of our journeying through Wales were wet and stormy; but we enjoyed the magnificent scenery between Llanroost and Bangor in sunshine. The rivers were full of water, brooks were become torrents, and the falls of the Conway and Lugwy the most magnificent instances I have seen of mountain cataracts. The Lugwy was as full of water as the Wye in the delightful days when we sailed to Monmouth. The fall is nearly two hundred feet, of which at least sixty feet is perpendicular. The rocks over which the river pours are in grand masses, the glen clothed with oaks, yews, and firs, and an underwood purple from heath, or brown from the dead fern. Snowdon rose above, curtained in clouds, from which it might be imagined the torrent had its source: and it was lost in clouds of foam below the fall. In the evening, passing by Capel Carrig, we saw Snowdon rising above clouds of the purest white, and a part of it was hidden

in bright orange clouds. Nothing could exceed the sublimity of this scene. Clouds add very much to the grandeur of mountain scenery, partly, I suppose, because they create obscurity and give indefiniteness to the scene, and partly because they naturally belong to the heavens, and are associated with our poetical superstitions and religious institutions. The gods of Homer descend on clouds. The glory of Jehovah on Sinai is seen through clouds. They have the elements of beauty in their colours, forms, and changes, and of sublimity in their obscurity, situation, and extent.

I shall write to you as soon as I arrive in Dublin. I hope you will have the kindness to let me hear from you as soon as you can. After seeing you, I can have no greater pleasure than that of seeing your writing. I beg you will remember me to Mrs. and Mr. Clifford with feelings of gratitude for the kindness I experienced from them at Peraystone. I am this moment told to hurry, as the packet will sail. Adieu, my charming friend, my dear grandmama, or by whatever tender or kind name you will permit me to call you, and believe me to be, in calms or storms, unalterably your devoted admirer,

H. DAVY.

To the Same.

Dublin, November 1, 1811.

. . . I wrote to you, hoping and expecting that Children would come; but accident made him appear faithless. On Friday I proceeded to Edgeworth's Town, where I experienced a most kind reception, and rested till Sunday morning. Miss Edgeworth was in better health than usual, and in high spirits, appearing to me as always the perfect model of a woman of great powers and literary habits, unassuming, dwelling in her conversation on topics of general interest, and elucidating her opinions by pleasing rather than brilliant imagery—displaying

constantly perfection of good sense and inexhaustible good humour.

Mrs. Beddoes I found greatly improved in bodily and intellectual health. You can have no idea at all of what she was from what you saw her, nor, I hope, of what she will be. She possessed a fancy almost *poetical* in the highest sense of the word, great warmth of affection, and disinterestedness of feeling, and, under favourable circumstances, she would have been, even in talents, a rival of Maria.

At Edgeworth's Town I enjoyed the fragrance of incense offered to my chief idol. There are few higher delights than that of hearing those we love praised by persons whose judgment even the world considers as approaching to infallible. It may be said that our own vanity is concerned in this; but I am rather disposed to consider it as a proof of the disinterestedness of affection. The Edgeworths think of you as they ought to think. I was pleased to hear the manner in which they spoke of Mrs. Clifford. Miss Edgeworth said she was a delightful old lady, full of varied information, who lived more than anybody she ever knew in others.

On Sunday I went, accompanied by Sneyd Edgeworth, to a place near Boyle, called Rockingham, a seat of Lord Lorton's. I was told it was the finest place in Ireland. There is a lake containing many islands covered with wood, all of late growth, some fine hills, of which the highest might in civility be called mountains, but no rocks, no ruggedness, nothing approaching to the grand. The showman of the place said (hearing me say that I had seen Killarney), "Do you not think Loch Rye the finest of the two?" I replied, No. He said, "Sure now, it is much more *uniform*." My Irish acquaintance is not the only picturesque critic I have known who confounded uniformity and beauty.

At Boyle, Children and S. Solly joined me, and we passed on to the west of Ireland. For the first twenty miles of our

journey towards Ballina, nothing was presented to the eye on which it could repose;—dark bogs, and low hills, and brown streams, constituted the features of the country. We gradually reached, however, a chain of low mountains, and the pass through them offered some wild scenes,—small lakes in perfect solitude, surrounded by cliffs, and large detached masses of rocks forming their islands. At the extremity of the pass there opened upon us a very grand and unexpected view. A magnificent lake, Loch Conn, appeared as if immediately below us, studded with islands, some green, some wooded, some rocky, and joined by the river Moy (a noble and turbulent stream) to the Western Ocean. Above the lake rose the mountains of Nephin and Nephin Beg, amongst the highest in Ireland. Some of their summits were bright in the rays of the setting sun, others were obscured by clouds, dense gray in the central parts, and tinged with golden light at their edges. The sea appeared through some of the passes of the mountains as if above the lake, and through that near the west glowing with yellow light. I never saw before so grand an assemblage of river, and lake, and ocean, and mountain scenery. From Ballina we proceeded by the side of the lake and under Nephin to Castlebar. Nephin has all the characters of an Alpine mountain, for its top was covered with snow, and clouds were constantly rolling about its sides, or hiding its summits. The country round Castlebar is interesting only from the forms of the distant mountains; the home view presents nothing worthy of notice. After Castlebar, our next resting-place was Ballinrobe, from which we visited Connemara, Loch Mask, and Loch Corrib, and Ross Cong.

Connemara is a very extraordinary mountain district. It is composed of wild rocky glens, close to each other. The mountains constituting their sides abut into Loch Mask, and they send into the lake their waters in a succession of cataracts. At the openings of the glens into the lake there are a number

of rocky islands which appear as if formed by rocks washed down from the valleys. The district is without any cultivation visible at a distance; savage, wild, and sublime, it appears unhaunted by the forms, and unsubdued by the energies of life. Loch Corrib is a larger lake than Loch Mask, but without its peculiar grandeur. It is distinguished for the multiplicity of its islands, some of which are wooded, some cultivated. At its upper part there are some wooded peninsulas, which put me a little in mind of the scene at Mucross (Killarney).

Ross Cong is a very singular place. It is at the top of Loch Corrib, and the waters collected in Loch Mask here make their exit by subterranean passages. There is here a village seated upon limestone rocks, arranged in the most fantastical forms. Trees arise from little glens in the rocks like those of Farley Hall. A beautifully clear river, larger than the Wye, rises of a sudden from the earth, then disappears under a limestone grotto, rises again through a fissure in the earth, falls over a group of grotesque rocks, and hastens into Loch Corrib. The mountains of Connemara are seen in the distance from this wild and extraordinary scene. I shall have tired you, so I shall at present say nothing of the people of the west of Ireland.

I returned on Wednesday to Edgeworth's Town, that oasis in the intellectual desert of this fine country; pray keep the expression a secret. I experience every kind of civility and attention from my acquaintance here, yet I sigh deeply for your society. You have given me a distaste for the common intercourse of the world; this is some harm amongst all the good I acknowledged in my last letter. There is a law of sensation, which may be called the law of continuity and contrast, of which you may read in Darwin's *Zoonomia*. An example is—look long on a spot of pink and close your eyes, the impression will continue for some time, and will then be succeeded by green light. For some days after I quitted you I had the pink light in

my eyes, and the rosy feelings in my heart, but now the *green hue* and feelings—not of jealousy, but of regret—are come. I am glad you are pleased with Farley. * * *

Ever yours,

H. DAVY.

To the Same.

Dublin, November 11, 1811.

* * * * *

The people of Connemara are not so interesting as the country. In the wildest scenes of a mountain country, the cultivated man, perhaps, most feels his power, and the rocks, and stony valleys, and cataracts, and clouds, at the same time that they delight the eye display a contrast by which his dominion over the elements is made evident, and show how much his efforts have tended to increase life and happiness; but in a moral wilderness there is no beauty, and little grandeur. Man, as a savage, chilled by poverty, robbed by oppression of his *rude* virtues, can awaken pity only, or pity mixed with anger—pity for the oppressed, anger for the oppressor—and in such a state of society one would only dwell in the hope of being able to improve, or of awakening the disposition to ameliorate in those who have the power.

As a physically gifted race, the people of Mayo and Galway are handsomer and more robust than those of any other part of Ireland. The women—some of them—have characters of softness and beauty. There are no manufactures in the country; little or no agriculture; little or no law amongst the tenants, but much litigation amongst the landlords, who for the most part are resident out of the country. Connemara is the haunt of deserters and smugglers. The few persons of the middling class who reside there are delighted to see strangers, who are hailed with the same feeling of novelty and

wonder as a comet in our planetary system. The lower classes are uncertain and dangerous, not unlike the natives of Owyhee ; a stranger is scarcely safe amongst them. There was only one place in Connaught, where I saw an improving peasantry, possessing industry, regular habits, and civility without fawning ; this was at Ballina. You will, I dare say, guess the reason—there are four or five great and liberal proprietors residing amongst them, and setting an example of cultivation and good manners.

* * * * *

Lady M., amongst other belles, is constant in her attendance at my lectures. She was asked why she went. She answered : “ I have, I *have* a reason.” How she can have subdued so many hearts is to me incredible. She flatters, but not now in a refined manner ; it is gross adulation. She does not bear the decline of her empire with dignity, but *daubs* in attempting to exalt both her personal and sentimental attractions.

There was an admirable scene at Lady Caher’s last night. Miss Owenson’s sister came in masquerade, and personated an antique princess of Kerry with excellent effect. The wits were almost all taken in, even Mrs. Parkhurst was deceived, though acquainted with the lady.

There are dinners and evening parties constantly, and what is extraordinary, I am more *fêted* and flattered than last year. If you were here I should be very happy.

* * * * *

I have made some new experiments, which are, I *think*, important, and I hope to have done some permanent good for Ireland. I proposed a new method of bleaching last year, which has been successfully pursued, and which, I trust, will be a national benefit.

* * * * *

To the Same.

Dublin, December 4, 1811.

You are now at Lowton. I have the power of dreaming and of picture-making as strong as when I was fifteen. I call up the green woods and the gleams of sunshine darting through them, and the upland meadows, where we took our long walk. I seem to hear, as then, the delightful song of the nightingale interrupted by the more delightful sounds of your voice. You perhaps will laugh at this visionary mood, and call it romance; but without such feelings life would be of little worth, and neither our affections nor objects of pursuit would be permanent. It is the continuity and unbroken recollection of pleasurable feelings which constitute the strength and vitality of our being. They are to thought what melody is in music. The mind in a healthy state must always blend its new impulses with old affections. Without this, its tones are like those of the Æolian harp, broken, wild, and uncertain, fickle as the wind that produced them, beginning without order, ending without effect.

* * * * *

There has been no packet for three days; there is a report of one being lost. We shall depart as soon as the seas are quiet. To see you is the strongest wish of my heart. My last lecture was received with a feeling and an effect that overpowered me. It made me feel a deeper responsibility than I ever felt before; and the enthusiastic attentions paid to me, make me humble rather than vain.

To the Same.

March 2, 1812.

I have passed a night sleepless from excess of happiness. It seems to me as if I began to live only a few hours ago.

Their marriage took place on the 11th of April, 1812. The last note preludes, it may be inferred, the event. The honour of knighthood had been conferred on him on the 8th of the same month. The letters which follow are very characteristic of his then joyous and excited feelings, as well as of the happy prospects which were opening out before him.

March, 1812.

My dear Mother—You may possibly have heard reports of my intended marriage. Till within the last few days it was mere report. It is, I trust, now a settled arrangement.

I am the happiest of men in the hope of a union with a woman equally distinguished for talents, virtues, and accomplishments, and who is the object of admiration in the first society in this country.

You, I am sure, will sympathise in my happiness. I believe I should never have married but for this charming woman, whose views and whose tastes coincide with my own, and who is eminently qualified to promote my best efforts and objects in life.

Remember me to my aunts with affection, and to my sisters with kind love.

I am, your affectionate son,

H. DAVY.

To his Brother.

Beechwood, April 22, 1812.

My dear John—My wife desires her kind love to you. She will now for my sake have the kindest regard for you, and when she knows you, for your own sake.

I have heard of some experiments you have made on the

action of digitalis and other poisons on yourself. I hope you will not indulge in trials of this kind. I cannot see any useful results that can arise from them: it is in states of *disease*, and not of *health*, that they are to be used, and you may injure your constitution without gaining any important result; besides, were I in your place, I should avoid being talked of for anything extraordinary of this kind, as you have already fame of a better kind, and the power of gaining fame of the noblest kind.

I am going on with my book.¹ I want you to send me, by return of post, the result of your most accurate experiments on fluoboric and silicated fluoric gas, as to the quantity of silex and boracic acid they contain, specific gravity, &c. It will be easy to gain the elementary numbers of these bodies from their gaseous combinations.

I have every prospect of happiness in my new relations. A most exalted and charming intellectual woman, full of good feelings, refined taste, and having a mind stored with various knowledge. My usefulness will be her happiness, and her happiness my glory.

I am, my dear John,

Ever your most affectionate brother,

H. DAVY.

To the Same.

My dear John—I told you I should come to the Highlands this summer, and I shall carry the plan into execution. I wrote to you to say this a few days ago. I addressed my letter Edinburgh, so that possibly it may be lying at the post-office.

I trust I shall have the happiness of seeing you before the end of July, and that I shall find you well, improved, active, and happy.

¹ His Elements of Chemical Philosophy.

I communicated to you in a former letter my plans as far as they were matured. I have neither given up the Institution, nor am I going to France; and wherever I am, I shall continue to labour in the cause of science with a zeal not diminished by increase of happiness, and (with respect to the world) increased independence.

I have finished the first part of my Chemistry [Elements of Chemical Philosophy], to my own satisfaction, and I am going to publish my Agricultural Lectures, for which I get one thousand guineas for the copyright, and fifty guineas for each edition, which seems a fair price. As I shall see you so soon, I will not write about any matters of science. I shall bring you what I think you will consider an agreeable present, copies of all your papers,¹ twenty-five of each as presents for your friends.

I am appointed professor [honorary] to the Institution, at the last meeting. I do not pledge myself to give lectures; Brande gives twelve; and as I have said before, if, after you have got your degree, you will try your eloquence in the theatre, the road will be paved for you. If I lecture, it will be on some new series of discoveries, should it be my fortune to make them; and I give up the routine of lecturing, merely that I may have more time to pursue original inquiries, and forward more the great objects of science. This has been for some time my intention, and it has been hastened by my marriage.

I shall have great pleasure in making you acquainted with Lady D. She is a noble creature (if I may be so permitted to speak of a wife), and every day adds to my contentment by the powers of her understanding, and her amiable and delightful tones of feeling. God bless you, and believe me to be,

Your ever affectionate brother,

H. DAVY.

¹ Papers published in the Philosophical Transactions.

The two following letters will be read with interest on account of the writer; moreover, they are not without value, as showing Miss Edgeworth's painstaking and business habits of authorship:—

From Miss Edgeworth.

Edgeworth's Town, December 1, 1806.

I have waited till our election for this county was over, that I might have a frank to convey to you my thanks for your obliging letter, and for your kind attention in sending me the extract I wished for from Dr. Priestley's.

We have reason to be gratified by your opinion, that we should be of use by writing upon professional education; but the more I think of it, the less I feel equal to such a difficult subject; and yet I am very anxious if I could, to do what I know is my father's most anxious wish. Indeed, this is one of the few subjects which has power to interest or occupy his mind at present.

My sister Charlotte's illness has turned all our thoughts away from our usual occupations: soon after you saw her here, seemingly in such perfect health, she caught a cold, and has never been well since. You know enough of her family, and of medicine, to be aware of the whole extent of the danger and of our anxiety. By Dr. Gregory's advice she now lives in two rooms, kept as nearly as possible at the temperature of 62°, and she is following his prescriptions exactly. But, alas! he has but little hope of their being of any material advantage.

My brother Henry has taken his degree, and is now with us, to our great comfort. He will be in London in the spring, and will of course attend your lectures. My father is in Dublin, gone to attend the meeting of a commission of ten of the principal people in this county, appointed to inquire into the present state of its education. I fear that he will not be able to do much good, as there are so many prejudices and

parties to contend with. If he finds he can do no good, he will withdraw.

Mrs. Edgeworth, and my aunt Sneyd, and all this family, desire to be kindly remembered to you, and are much gratified by the manner in which you speak of your visit to Edgeworth's Town. We hope that whenever you come again to this country, you will not forget to prove to us that you were pleased by your last visit, by repeating it.

Your obliged, humble servant,

MARIA EDGEWORTH.

If any thoughts should occur to you upon the subject of professional education, or if any should be suggested by the literary friends whom you have every day an opportunity of seeing in London, you will do me an essential service by communicating them to me, and by telling me of any books that could give me information. I shall certainly do my best to turn my mind to this subject, as my father wishes it so much, but fear it will be without success.

From the Same.

Edgeworth's Town, January 21, 1810.

With all due sense of awe, I address myself to him who has not only had the honour of receiving the prize medal from Napoleon, but who has had the far greater honour of exciting the Western Emperor's national jealousy, and anti-Anglican spleen to such a pitch, as to make him send for his chemists of the Institute, and rate them all round, after his manner, in imperial Billingsgate.

N. B. If you do not yet know the extent of your own glory in the facts to which I allude, inquire of our friend, Mr. Chenevix, whom you will probably soon see in London: he can entertain you with an infinite variety of curious Parisian

anecdotes. No doubt you have read his book on Haüy's and Werner's systems, "*Reflexions sur quelques Méthodes Minéralogiques.*" Though I know nothing on the subject, and though I felt little interest or curiosity about the question in dispute, I found myself carried on by the book as soon as I had read a few pages, and I think the general philosophic view it contains so just and enlarged, and the tone of raillery so sprightly, that it cannot fail to please you. Pray ask Mr. C. to show you a little tract he has published in Paris on the German transcendentalists. It contains much philosophic satire, well deserved, well applied.¹

Though it may appear from all I have yet said, that it was the purport of this letter to praise Mr. Chenevix's book, yet, I assure you, I had in beginning it no such intention. My object was, and is, to ask you for corrections for a second edition of my father's essays on Professional Education. In spite of one of the Edinburgh Reviewer's (our old *friend* Sidney Smith's) contemptuous mention of that book, our bookseller tells us the sale has proved that some people have thought it worth buying, and he is in haste to bring it out in October. My father is very anxious to improve it, and to induce his private friends to supply the deficiencies of his public critic, by pointing out *where* his opinions are erroneous, and where he has not gone to the bottom of his subject, &c. In general, when authors ask to be told of their faults, they mean to beg for compliments, but I believe you know enough of my father

¹ The late Mr. Chenevix was distinguished in his day as an analytical chemist. Owing to a disgust he acquired in connexion with a mistake he fell into respecting a new metal, palladium, discovered by Dr. Wollaston and for awhile not claiming the discovery, he forsook chemistry for literature, in the prosecution of which he displayed much intellectual activity and varied powers. His critical made a greater impression than his dramatic writings. His principal labours are mentioned in the account given of him in the New General Biographical Dictionary (Rose's).

to be convinced that he is sincere in his candour, and that you will really increase his esteem and regard by speaking the plain truth to him. Give us then an hour or two of that time of which we know the value, and trust that we shall not be ungrateful. I am not so unconscionable as to ask you to read the book twice over, but if you have read it, turn to the index, hunt it, refer to doubtful passages, and give us your own and the opinion of your sensible friends upon the chief points in which you may differ from us. Note your remarks as shortly as you will, and they will answer our purpose thus:—

Page — repetition.

— — compress.

— — explain.

— — differ from you in opinion here, because, &c.

— — more information can be obtained on such and such points by referring to such and such books.

You will observe that my father has made use of that letter of Priestley's, which you were so good as to give me.

I do not know how I can bribe you to take this tiresome trouble for us, except by a promise of an account in return of a bog-quake which has happened in our neighbourhood. My father is now employed in preparing a report on this subject for the commissioners for improving the bogs of Ireland. But I rather think that if your glories have not totally altered you, since we had the pleasure of seeing you, you will need no bribe, or further solicitation, but that you will feel gratified by having an opportunity of serving and obliging your old friends. With this belief, and with the best wishes of this whole family for your fame, health, and happiness—or for your happiness, health, and fame, if that should be the climax you prefer—I bid you adieu.

MARIA EDGEWORTH.

The fragmentary passages which follow, are taken from note-books used during this period.

“ It is only by making truths popular that their existence can be secured. Books may be destroyed, a new Omer may arise in a new Emperor, and *all things may fall*,—but prejudices conquered cannot be *re-established*. And, if errors gain *power* from habit, and from the length of time they exist, truths will not easily be forgotten, especially when they are connected with absolute utility.”

“ It is principally in consequence of improvements made in our instruments of experiment, that the sciences have been so much extended, and that they have been made the common property of all those having inclination for studying them, and patience in pursuing them.

“ Doctrinal speculations at present cease to be formidable in their influence; and variety of opinion, and freedom of thought, can only produce benefits in a department of knowledge where the appeal is to nature, and where there can be no fair decision without the evidence of present facts.”

“ Experimental researches have led to the greatest discoveries made in modern times; for by the mere contemplation of events, extensive truths are seldom gained: the senses are imperfect; they need assistance to enable them to discover truth; and active inquiry by the trial of results, seems to be that which is best fitted to our nature, and to the development of truth.”

“ Time, and duration, and infinity, &c., are all peculiar properties of sensation, as much as form and colours, but more variable, less determinable, and less distinct.”

“ Men whose powers are *very great*, and who exhaust themselves upon great occasions, often appear poor in conception, and affected in expression, when other men are lively and active. The torrent leaves behind it a sandy and barren

strand ; in summer the stream is wholly unlike what it was in winter."

" The high state of civilization in Greece in the age of *Homer*, is almost demonstrated by the perfection of their language."

" No man yet ever made great discoveries in science, who was not impelled by an abstracted love."

" To expect knowledge from an uncultivated nation, would be to expect herbage, corn, and trees, upon a barren rock, exposed to the agency of the elements.

" The first object of man is to supply his *pressing wants*: to provide *food*; to protect himself amidst the war of the elements.

" In his savage state no knowledge is valuable to him but the knowledge connected with his common appetites. The savage of Avignon regarded not the noise of the multitude in the streets of Paris, but he was roused in a moment by the *cracking* of a *nut*, or by the murmuring of water."

" We know nothing of the first state of society in the nations that appeared the most enlightened amongst the people of antiquity.

" It happened that whilst one part of the world were enlightened by Religion, another part were left to Nature; and from this part proceeded the sciences; and from the union of the sciences with true Religion in these latter times, everything grand, everything dignified has arisen. A GREAT TRUTH.

" Much ornament attached to opinions proves that they are sickly: the leaves look most brilliant and beautiful before they die."

" If the mathematical sciences are efficacious in their power of strengthening the reason and refining the judgment, the chemical ones are still more efficacious, because they approach nearer to the facts of common life."

" Some of those speculations, formed upon insulated facts,

bring to my mind an ingenious person who made a *system* of *geology*, in which he attempted to show that all rocks and soils were the produce of alluviums; and he founded his reasoning upon the facts of the gravel pits of Kensington, where only he had studied geology."

As an example of his poetry belonging to this period, one small fragment may suffice; and that is given for the sake of the noble subject, and the ennobling thoughts connected with the spot. The lines bear the date of Pencester, March 3, 1811.

Penshurst.

Through thy deserted chambers I have walked
 Musing on elder times,—cheering my mind
 By memories of the great and noble dead.
 Within thy walls, the first high spirits breathed,
 Who, through the darkness of the feudal times,
 Threw the bright light of letters and of arts,
 And to the warlike temper of the age
 Gave softness and the charms of social life.
 Sidney, the hero, poet, and the sage,
 Here nursed his noble thoughts,—here lisped
 In pastoral numbers; to the dreams of love
 Gave the charm of sentiment and thought,
 And with the noble tone of chivalry,
 Blended the sternness of the patriot-mind.
 A noble race is gone—the scathed oak,
 Whose hollow ruins stand on yonder hill,
 Affords an emblem of their poor remains.
 Two thousand crescent moons have scarce appeared,
 Since those dark walls resounded to the noise
 Of song and music, and the laughing voice

Of revelry ; and royal was the feast ;
The lance and target then were bright,
And brilliant was the cuirass ; chairs of state
Were fixed in every chamber ; lovely dames
And gallant knights tripped gaily in the dance,
And she was Queen, first mistress of the ocean,
She who broke the Roman yoke, and scattered on the waves
The invincible Armada !

CHAPTER V.

FROM HIS MARRIAGE IN 1812, TO HIS RETURN TO ENGLAND AFTER HIS FIRST CONTINENTAL JOURNEY IN 1815.

WE are now entering upon a period when his course of life was more varied than at any former time. By his marriage with a lady possessing ample means, he was relieved from the necessity of lecturing, and left free, perhaps too free, to follow his favourite pursuits, comprised in scientific research, travels, and field and river sports. When I say, perhaps too free, it is from the conviction that previously he had freedom enough, and that it was an advantage to him to have certain duties to perform, such as those which in his capacity of professor of chemistry were most congenial to him. Another *perhaps* may be ventured, arising out of his marriage, that it tended to separate him more and more from his scientific friends, and connect him more and more with persons of rank and fashion, thus exposing him to a danger before alluded to. Such an exchange certainly was neither advantageous nor desirable; and if it took place, it was, I believe, in a manner nowise anticipated by him, and from minute

circumstances of intercourse, gradually acting, which it may be difficult to describe. I am induced to make these remarks with the persuasion that, whilst there might be some truth in this asserted change, there was even more exaggeration in the charge of its evil influence, and I cannot but think that even Professor Forbes affords an instance of the latter, misled by what may have been told him, and by what he may have read in Dr. Paris's book; for sure I am that he at least would wish to be just in the statements respecting my brother, which he makes in the dissertation already referred to on the mathematical and physical sciences—statements hardly compatible with the character which, in glowing colours, and with a generous pen, he has drawn of the entire man, sketching his career from its beginning to its end. A laboured refutation I shall not attempt—it would hardly be becoming in me. I shall be well satisfied if what I shall have to bring forward, derived from my brother's own private notes, and from his letters, may help to refute what is erroneous as regards his moral worth, and his claims to consistency and respect.

His devotion to science, after his marriage, continued unabated, whatever may be said to the contrary. Proof is afforded in the results of his labours, which were communicated from time to time to the Royal Society, and were published in the *Philosophical Transactions*. The most important of these now requiring to be noticed, were his extended researches on chlorine and its combinations, on

fluorine and iodine, on the diamond, and the colours used by the ancients. Some of these inquiries were carried on at home, chiefly in the laboratory of the Royal Institution, with which he still continued connected as honorary professor of chemistry; some on the continent, for even when he travelled he went provided with a portable chemical apparatus.

His continental travels were commenced under peculiar circumstances, even before the long protracted and dreadful war with Napoleon was brought to a close. He commenced them in the autumn of 1813, owing permission to visit France to his scientific reputation. In this, his first journey, he was accompanied by Mr. Faraday (who has since so highly distinguished himself in original research), "as his assistant in experiments and in writing." He crossed the channel in a cartel to Morlaix. He spent two months in Paris, variously occupied between the calls of society and science. It was here that he commenced his experiments on the nature of iodine, a substance shortly before discovered by M. Courtois, and proved it to be a simple or undecomposed body analogous in its relations to chlorine. From the French capital he went into Auvergne, for the purpose of examining the extinct volcanoes of that mountainous region. From thence he proceeded to Montpellier, where he resumed his inquiries on iodine. After a short stay there, he crossed into Italy by way of Nice, and the Col de Tende, and passing through Turin, proceeded to Genoa, where he made his first experiments on the electricity of

the torpedo. In the month of March, in the year following (1814), he visited Florence, and during the fortnight he was there, he instituted experiments on the diamond, taking advantage of the great lens belonging to the Cabinet of Natural History of that city. The results he obtained, showed it to be pure carbon. After quitting Florence, till he went northward in June, driven by the heats of an Italian summer, he passed his time between Rome and Naples, attracted to the latter by an eruption of Vesuvius, the phenomena of which he was anxious to examine, in quest of the mysterious cause of volcanic action, and the source of its igneous eruption, and whether bearing out or not the theory, which he was the first to propose, of both depending on the metals of the earths and alkalies—an hypothesis he felt obliged to relinquish, from the negative results of his researches. At the same period he visited Pæstum. The summer months he passed in Switzerland, taking up his residence in a country-house, charmingly situated on the shore of the lake of Geneva, at a short distance from the town. In returning to winter in Italy, he first made acquaintance with the Tyrol, and became enamoured—an enduring love—of its scenery, in which the beautiful and the grand are so happily blended, and where to the sportsman there is the additional attraction of good angling in its mountain streams and lakes, and of interesting shooting in its marshes, forests, and Alpine heights. This winter, like the preceding spring, he spent partly in Rome, where he examined

the pigments used by the ancients, some of which had just then been found in the Baths of Titus, and partly in Naples, occupied as before in his geological and volcanic inquiries. He returned to England in the spring, again passing through the Tyrol, and was in London in the beginning of May, 1815. On commencing his continental journey, it had been his intention to visit Sicily, and perhaps Greece, but the plague breaking out in the Levant, this latter part of his scheme of travels was prevented.

The following letters belong to, and illustrate, this period. The first are from the Highlands of Scotland, which he visited in the summer after his marriage. I met him at Rokeby, in Yorkshire, and accompanied him as far as the river Awe, in Argyleshire, and I well remember the proof he there gave of his angling keenness, and the fright he occasioned us in its indulgence. It happened thus: When we came in sight of that fine river, longing to get to it, he exchanged places with me, his seat in the carriage for my saddle—I was riding—and hurried to the stream, rod in hand. Shortly after, the horse reappeared, galloping wildly back without its rider, of course suggesting the fear of his having been thrown—a fear aggravated by the precipitous and then rocky nature of the road—but fortunately soon calmed by seeing him, on turning an angle, intently pursuing his sport. The horse had got loose from having been negligently tied; and no doubt the provender at the last inn was more attractive than the poor pasture by the river side. On the same occa-

sion I had proof of his patience in following his favourite sport. The river at the time was low, the sky clear and calm—the circumstances altogether most unfavourable for salmon-fishing—yet, to have a chance, the next day, from dewy morning till dewy evening, he kept by the river side, exercising all his skill, but without success, not raising even a single fish. His after sport, in Sutherlandshire, as described in the two first letters which follow, was the perfect contrast of this. The river he fished was the Brora, flowing out of the loch of the same name, still an admirable salmon river, especially early and late, as in March and September, weather favouring.

To John George Children, Esq.

Dunrobin Castle, August 21.

My dear Friend—I hope you are making progress in our manufactory.¹ I shall expect, on my return, to find your powder the best and the strongest, and to make trial of it. I wish I had some of it here; the black-cock and grouse would feel its efficacy. I have been expecting a letter from you every day.

This house is so delightful, the scenery so grand, and the field sports so perfect, that I think we shall not quit it for a fortnight.

I went to Inverness and fished for salmon. I also went to two or three other places, but not one did I catch till I arrived here. The first day I landed seven noble ones, and played three more in four or five hours. The next day I played eight and landed three, besides white trout in abundance.

I have shot only one day, for a few hours; but we found

¹ See note, p. 138.

grouse at every fifty yards, and I shot seven. We are just going to try sea fishing.¹

Pray write to me a little news of what is doing for science and the world.

I beg you will remember me most kindly to your father, and to Dr. Babington, and Brande, when you see them. I am, my dear friend,

Most affectionately yours,

H. DAVY.

To W. Clayfield, Esq.

Dunrobin, August 28, 1812.

Dear Clayfield—I am much obliged to you for two very kind letters, and for a box containing specimens from St. Vincent. I beg you will thank the gentleman who was so good as to cause them to be collected for me.

The ashes,² I think, are likely to fertilize Barbadoes. There

¹ Having had no taste for ordinary sea fishing with mere line and bait, the "sea fishing" alluded to by him, I infer, was for salmon and sea trout, with rod and fly, there being, it is remarkable, about five miles from the castle, a locality in the sea, where these fish can be so taken. The exact spot is "the big stone," a rock projecting into the tideway; the time, the ebb of the tide; the period of the year, from about the 15th of July to the end of August. The "big rock" is near the "Little Ferry," below the embouchure of the river Fleet, and the embankment by which so great an extent of land has been reclaimed from the sea. With one exception, occurring at Isla, it is said, there is no other instance known of salmon taking the fly in salt water.

² They were of the eruption of the Soufreire Mountain, Morne Garou, in St. Vincent, on the 30th of April, 1812, when, by their fall, the sun's light was entirely hid at Barbadoes, occasioning the darkness of night at mid-day. The fall of ashes was so considerable there, that after an interval of more than thirty years, I saw well marked traces of them, and heard of their fertilizing effect, as conjectured by my brother, confirmed by the planters.

is a parallel case of materials having been carried so far in the eruption in Iceland, in 1783.

I have, with my wife, been making a tour through the north, since the beginning of July. We have arrived at our extreme point, and shall slowly proceed south in about a fortnight.

I wish you could be of our party here; we are in a delightful house, that of Lord Stafford, in a country abounding with fish and game. I have caught about thirty salmon since I have been here, and killed grouse, wild ducks, and teal, &c. I have not yet shot a stag, but I hope to do so this next week.

I have just published a volume of the Elements of Chemistry, and I hope to publish another in the course of the spring.

Having given up lecturing, I shall be able to devote my whole time to the pursuit of discovery.

I have not sent you a copy of my book, for I thought the best mode of avoiding giving offence to some, was by not making presents at all. Had I not so determined, one of the first copies would have been sent to you, as a mark of the warm esteem and regard of

Your affectionate friend,

H. DAVY.

To his Mother.

Dunrobin Castle, August 22, 1812.

My dear Mother—John, who left us about a fortnight ago, will have written to you fully. He was quite well, and going on in the right way. Everything that I heard of his habits and pursuits at Edinburgh was what I expected. I doubt not he will be all we can wish.

He told me he had written to you about some advance in his annual allowance. If it is not *entirely convenient* to you, I will do it, and lest it should injure John's feelings of independence, it may appear to come from you. It is a good

thing for him to be economical, but he ought to want for nothing, and sixty pounds more or less may be of great importance now, but of none when he is able to provide for himself, which he will be able to do as soon as he has graduated.

My wife is very well. She desires her kind remembrances to all my family. We are as happy and as well suited as I believe it is possible for people to be; we have nothing to regret in our past lives, and everything to hope for.

We shall stay here (at the Marquis of Stafford's) for a fortnight longer. It is a most delightful family, and a most delightful place. We shall then go to the Duke of Gordon's, from that to the Duke of Athol's, then to Lord Mansfield's (Scone House), and then to Edinburgh. For security sake address to me, Post Office, Edinburgh. My letters are forwarded from thence under franks. We shall return to London in the beginning of December.

With kind love to my sisters and my aunts, I am, my dear mother,

Your affectionate son,

H. DAVY.

The next letters were written after his return. All but the first relate chiefly to an accident which he experienced in his chemical inquiries, which nearly cost him the loss of vision of the injured eye. It was occasioned by the explosion of a new compound of azote and chlorine, on which he was experimenting in the laboratory of his friend, Mr. Children, at Tunbridge, a compound that had deprived the author of the discovery, M. Dulong, of an eye

and a finger. The mode of preparing it was not then known in England.

To his Brother.

London, October 25, 1812.

My dear John—Mr. Playfair will have told you of our safe arrival. I did not write till I had something more to say. I have delayed my letter for two days, but still I have not much to say.

There is nothing doing here. I have commenced some experiments. I am attempting to decompose hydrofluoric by chlorine, and to combine azote from prussic acid with chlorine. I heated this day diamond powder in chlorine, but there was no action. My wife is much better, quite well except the swollen foot, and in excellent spirits.

Your review will appear in the next number.

I think you should answer Murray's assertion¹ by a short note with testimonials. The controversy is closed.

Go on and prosper in all good things, in usefulness, happiness, and knowledge.

I am, my dear John,

Your very affectionate brother,

H. DAVY.

To the Same.

London, November 16, 1812.

My dear John—I have discovered the mode of making the combination of azote and chlorine. It is by exposing chlorine to a very weak solution of ammonia, or to a solution of nitrate of ammonia, or of oxalate of ammonia.

¹ That muriatic acid gas contains water. The answer was given in the thirty-fourth volume of *Nicholson's Journal*.

It must be used with great caution. It is not safe to experiment upon a globule larger than a pin's head. I have been severely wounded by a piece scarcely bigger. My sight, however, I am informed, will not be injured. It is now very weak. I cannot see to say more than I am,

Your very affectionate brother,

H. DAVY.

To the Same.

Wimpole, January 17, 1813.

My dear John—I have had another severe attack of inflammation in the eye, and was obliged to have the conjunctiva and cornea punctured. I suspect the cause was some little imperceptible fragment. I am fast recovering, and hope I shall see as well soon as with the other eye.

My operations and employments have been in great measure suspended, yet I have found opportunities of working a little upon fluorine. I believe I have nearly got to the bottom of this difficult question, and have expelled fluorine by chlorine, though I have not yet seen it; but I have ascertained that it expels oxygen from most compounds, and forms, with chlorine and oxygen, the triad of supporters of combustion. I will give you my processes in my next letter.

I congratulate you on being elected a president of the Royal Medical Society. Such an election does as much credit to the members as to yourself.

I am here (at Lord Hardwicke's) for a few days, at grass. I will write to Dr. Hope as soon as the pressure of my occupations is over. He has the details of azotane [the explosive compound] correctly given, as to its preparation, in Thompson's Journal, putting "strong" for "weak."

Lady Davy desires her love. Pray remember me to Mr. Playfair, to Mr. Allan, and to Mr. Moore.

I am, my dear John,

Your very affectionate brother,

H. D.

The complete recovery of his eye was protracted nearly till April, as appears from the following letter descriptive of his plans and pursuits, and especially of a proposed visit to Cornwall, some of the particulars of which, when accomplished, are detailed in letters to Lady Davy:—

To his Brother.

April 4, 1813.

My dear John—It is long since I have heard from you. I am going into Cornwall. Pray address a letter to me at Penzance. We are going, a pretty large party, into the west, and shall fish in our way. I shall be absent from town about three weeks. I wish you were amongst us. We have come to the resolution of going to Scotland in the summer. Lady Davy and I shall have the pleasure of seeing you there. The Cornish journey will be too rapid a one, and too interrupted, for Lady Davy to be of the party. Blake, Warburton, Pepys, and the Sollys, form a party who will combine mineralogy and fishing.

I am now quite recovered, and Jane is very well; we have both enjoyed the last month in London. I have been hard at work. I have expelled fluorine from fluato of lead, fluato of silver, and fluato of soda, by chlorine. It is a new acidifier, forming three powerful acids, hydro-fluoric, silicated fluoric, and fluoboric. It has the most extensive energies of combination of any known body, instantly combining with all the

metals, and decomposing glass. Like the fabled waters of the Styx, it cannot be preserved, not even in the ape's hoof. We have now a triad of supporters of combustion.

I have just finished printing my agricultural lectures. I shall send you a copy as soon as I can.

Thenard has proved Lanpadius' liquor to be what Clement and Desormes thought, carbon and sulphur, fifteen to eighty-five; nearly two proportions of sulphur to one of carbon.

Remember me to Mr. Playfair when you see him, and to the Mackenzie family,¹ and the Fergusons.² We hope to see Mr. Playfair in May. We shall see you, if all things do well, in July. I am,

Your most affectionate brother,

H. DAVY.

To Lady Davy.

Whitchurch, April 14, 1813.

We had a very rapid and prosperous journey hither. The spring is everywhere in full progress. The white thorn in leaf, the plum and cherry trees in blossom, the birch covered with purple buds, and the horse chestnut throwing forth its leaf as if there was no frost in the future year.

About half a mile from this town a clear stream burst upon us, flies were floating in the air above, fishes sporting on the surface of the water—the sight was irresistible. We got out of the carriage, paid our devotions to the naiad, and stayed on the banks till the sun was fairly down, and a glorious sunset it was—the moon high in the blue sky—at first pale as a

¹ Mr. Henry Mackenzie's—the Man of Feeling—then in his green old age, hale and active; how well I remember him about this time, as we once met him briskly riding on his shooting pony; his family then so large and happy—and *now* all but one of those I knew in the grave!

² Of Raith.

cloud, whilst the west was yet purple, then gradually growing into majesty of light and fulness of beauty.

We go on to Deptford Inn this day, where I hope to have the pleasure of receiving a letter from you.

I flirt with the water nymphs, and I make you the personification of the spirit of the woods, and the waters, and the hills, and the clouds, and of the sunbeams, and of the zephyrs. This is the earliest form of religion. Men made the visible form of the Deity that which they loved most, or that which was most useful. Hence, Idolatry was founded on affection, on gratitude; and the word idolize, in feeling, is not metaphorical.

Tell Blake I caught five trout, H. S. one, and S. S., 0.

Ever yours,

H. D.

To the Same.

Launceston, Sunday, April 20, 1813.

I inquired at the post-office, Exeter, with the hope of a chance letter from you, but I was disappointed; to-day, at Lostwithiel, I depend upon tidings, and my heart, which is generally a happy prophet, tells me they will be good.

Our weather has been delightful. We have traced one of the Devonshire streams (the Dart) to its rocky source. It is a river clear, blue, and bright. It pours the water of Dartmore over rude rocks of granite, by a succession of cataracts, through chasms and glens, into the valley of Ashburton, where it is subdued, so as to prepare it to meet and be lost for ever in the ocean. We stopped a few hours yesterday at Tavistock: the Duchess sent me a very kind note, asking me to spend the day there (*i. e.*, Sunday); but the inn at Tavistock was so vile, that we had no disposition to rest there a night, and I could not, in honour, leave my companions for so long a time. I sent her a note full of acknowledgments and

regrets. The Duke and Lady Jane are both very well. We walked a few miles down the Tavy, the banks of which are broken, and finely wooded. About three miles below Tavistock it is joined by a beautiful and clear torrent, and the two rivers fall through a chasm of rock, and are then lost in the hollow of a wild glen, something like the upper part of Dove-dale.

The Devonshire rivers have afforded us very little sport. I hope you received the fish I sent from Andover.

Ever yours,
H. DAVY.

To the Same.

Axminster, April 27, 1813.

I received all the letters in passing through Exeter at noon this day. I have *dwelt* upon the last *only*, as it contains the most agreeable intelligence. George K.'s two communications fidgetted me. I have always quoted him as free from any taint of the American plant, yet it certainly displays itself in both his letters. It was unworthy of him to suppose of you and of me any want of confidence, and to attribute to me the paltry feeling of *fear* of anticipation. Even in cases where *emulation* might have existed, I should despise myself for feeling it: for science ought to have no other objects than truth and usefulness.

I shall write to him to-morrow, not in anger, but in sobriety of explanation:

I rejoice in Tennant's success.¹ I am glad that Warburton has taken such interest in his cause. It has exalted my opinion of his feelings, for it shows that he is not merely a being of ratiocination.

¹ On his receiving the appointment of Professor of Chemistry in the University of Cambridge.

I am glad at all things that give you pleasure, whether in the shape of lost good recovered, or social parties, or pleasant mornings.

We have had frost and snow. This evening was promising, bright purple clouds, and a glorious sunset. God bless you, my dear Jane!

I am, ever your most affectionate,

H. DAVY.

To the Same.

Fordingbridge, near Salisbury, April 29, 1813.

We have arrived so far safe and well. The cloudy skies and cold rains, though they have made the face of nature less agreeable, have not been unfavourable to us as anglers. I hope you will have some proof of this to-morrow in the grayling which I have sent you.

I had a letter whilst at Penzance, not merely in the common tone of civility, from the Duke of Bedford, but really kind and friendly, saying that he had never so felt his inattention to the state of the inn at Tavistock, as in my case, and promising an immediate amendment, and offering a bed and a most hearty welcome at Longbrook—a magnificent spot! It is an eagle's nest upon the summit of the rocks above the Tamar, here broad and shallow, and rippling over a pebbly bed, soon lost in a noble estuary, bounded by the high lands above Plymouth, and the woods of Mount Edgecomb, and bearing our castles of defence and of dominion.

We are here on the banks of the Avon, a large and clear river, low hills, but well wooded, and green pastoral meadows. The moving water and the changing sky in our art, keep the mind in a series of impressions. One seems as it were to become a part of nature. The world and its cares and business are forgotten: all passions are laid asleep. Success awakens no envy, for accident is always supposed to interfere.

Statesmen are envied, philosophers persecuted, the benefactors of mankind banished or neglected. We live a life of simplicity and innocence, according to the primary laws of nature—losing all trifling and uneasy thoughts—keeping only what constitute the vitality of our being, the noble affections. Of mine, you know the highest and constant object.

Ever yours most truly,

H. DAVY.

His proposed visit to Scotland, promised in a former letter, was prevented by his continental journey, having in the interim, beyond his expectations, obtained the requisite permission from the French government. The following letters were written on this occasion:—

To his Mother.

Andover, October 14, 1813.

My dear Mother—You will receive about the same time as this letter a parcel containing gowns for you and my sisters from Lady Davy.

We are just going to the continent, upon a journey of scientific inquiry, which I hope will be pleasant to us and useful to the world. We go rapidly through France to Italy, and from that to Sicily, and we shall return through Germany. We have every assurance from the government of the countries through which we shall pass, that we shall not be molested, but assisted. We shall stay probably a year or two.

I have made every arrangement for John. I have left £32 to pay for his admission into the Royal Society, which will be useful to him professionally, and by the time I return I hope to hear of him dubbed a Doctor, and a great as well as a

good Doctor. I hope you will find no difficulty in providing means for him during the next eight months.

As soon as I have settled a plan of correspondence abroad I will write to you, and shall hear of you from John as often as possible. As I am permitted to pass through an enemy's country, there must be no politics in any letters to me, and pray do not write except through the channel which I shall hereafter point out.

I am going to travel, and when I return shall peacefully fix my abode for life in my own country. John goes on as well as possible, and is a very excellent and worthy man. Pray take care of Betsy; when the wind is cold, she must not think of going out. Tell Grace not to be afraid, though I am going through France. My love to Kitty, to Grace, and Betsy. Wishing you all health and happiness, I am, my dear Mother,

Your very affectionate son,

H. DAVY.

To his Brother.

Plymouth, October 15, 1813.

My dear John—I am just about to embark for Morlaix, on my continental expedition. I had hoped to have heard from you before I left London, respecting your paper.¹ I have sent it by Lord Webb Seymour. Pray do not defend Black's hypothesis. I know so well the tone of the feeling of the Royal Society, and I am myself so convinced on the subject, that I should be sorry you diminished your popularity by assuming it as the groundwork of an argument. Give your results, reason against Crawford, and, if you please, leave your opinion in the egg, but do not produce an egg which may turn out addle.

¹ An account of some Experiments on Animal Heat, published in the Transactions of the Royal Society for 1814.

I have just given your certificate as F.R.S. to be put up, and have left an order for the payment of thirty-two pounds eleven shillings, which will free you for ever from any claims, and I beg you to accept this.

Send your paper to Sir Joseph Banks, and he will communicate it. Take care that you put your own name to the head of your paper, and let it be carefully revised. If you have any doubts, send no paper. You have done enough to be secure of your admission into the society.

I have written to Dr. Weir about your employment in the medical department of the army, as soon as you shall have graduated. Sir Joseph Banks says he will do anything he can for you, and I am sure there will be no difficulties in the way of your rising rapidly in that profession.

I shall write to you from France as soon as I have ascertained how you can answer my letters. I trust you will do all things that become a man to whom fortune and fame are obvious, and wait only on his industry and perseverance. My wife desires her best regards.

I am, my dear John,

Your very affectionate brother,

H. DAVY.

The following letter contains an epitome of his doings from his leaving England to his arrival at Florence:—

To the Same.

Florence, March 18, 1814.

My dear John—I have written to you several letters, but I have not yet received one in return. This I attribute to the difficulty of communication, not to any want of kindness on your part.

Write to me, Alla Posta, Roma—there is now full communication between Italy and England—and tell me all the news: what you have done, what you have published, and what you are doing.

I find the French chemists inclined to your views of animal heat as a chemical process, and Le Gallois strongly opposed to Brodie; yet, after much discussion, I have retained my opinion.

We have made a most interesting voyage in eventful times. I have passed from the Pyrenees to the Alps, and have twice crossed the Appenines, and have visited all the most remarkable extinct volcanoes in the south of France. All the basalt that I have seen between the Alps and Pyrenees is decidedly of igneous origin. I have observed some facts on this subject that are, I believe, new—a regular transition of lava into basalt, depending upon the different periods of refrigeration; and true prismatic basalt in the interior of an ancient lava.

I have worked a good deal on iodine, and a little on the torpedo. Iodine had been in embryo for two years. I came to Paris; Clement requested me to examine it, and he believed that it was a compound, affording muriatic acid. I worked upon it for some time, and determined that it was a new body, and that it afforded a peculiar acid by combining with hydrogen, and this I mentioned to Gay Lussac, Ampere, and other chemists. The first immediately “took the word of the Lord out of the mouth of his servant,” and treated the subject as he had treated potassium and borax. The paper which I sent to the Royal Society, on iodine, I wrote with Clement’s approbation, and a note published in the *Journal de Physique* will vindicate my priority. I have just got ready for the Royal Society a second paper on this fourth supporter of combustion.

The old theory is nearly abandoned in France. Berthollet, with much candour, has decided in favour of chlorine. I know no chemist but Thenard who upholds it in Paris, and he upholds it feebly, and by this time, probably, has renounced

it. I doubt if the organ of the torpedo is analogous to the pile of Volta. I have not been able to gain any chemical effects by the shock sent through water; but I tried on small and not very active animals. I shall resume the inquiry at Naples, where I hope to be about the middle of May.

In my journey I met with no difficulties of any kind, and received every attention from the scientific men of Paris, and the most liberal permission to go where I pleased from the government.

I lived very much with Berthollet, Cuvier, Chaptal, Vauquelin, Humboldt, Morveau, Clement, Chevreul, and Gay Lussac. They were all kind and attentive to me; and, except for Gay Lussac's last turn of publishing without acknowledgment what he had learnt from me, I should have had nothing to complain of; but who can control self-love? It ought not to interfere with truth and justice; but I will not moralise nor complain. Iodine is as useful an ally to me as I could have found at home. Tell me what you are doing, and what you wish, and command me as your affectionate friend, and love me as

Your affectionate brother,

H. DAVY.

Of the few remaining letters which I have to give, written about this time, the only one that requires mention is that relative to France. The draft of it is without address by name, and without date as to time and place, but from its tenor it may be inferred to have been intended for the first minister of the crown, then Lord Liverpool, and that it was composed soon after his return from abroad, and shortly after the capitulation of Paris to the allied armies. Whether the letter was forwarded or not I am

ignorant; the draft is in my brother's handwriting, and from the kind of writing, was evidently struck off at a heat, under the influence of strong feeling. Readers of it will, according to their preconceived views, form different opinions respecting the sentiments expressed in it. For the sake of France, and for the sake of Europe, I would hope that the very sad view he takes of the French as a people is an exaggerated one; though I fear his view is not exaggerated of what we have to dread from the military power of France.

To his Mother.

Rome, January 11, 1815.

My dear Mother—Tell Betsy that I am much obliged to her for her kind letter, and delighted to hear that you are all well.

I am very glad to hear of a disposition to scientific activity in my native town,¹ and shall be happy if I can do anything to be useful to the museum. I will send to it some specimens from the continent; and, if there are subscriptions, pray get my name put down for twenty pounds.

We have almost as much society here as in London, and a great part of it our old friends.

* * We all hope for a long peace. We all hope that the glory England has gained in a war for the defence of the liberty of Europe will not be thrown away, and that the petty squabble with America, which, if successful,

¹ The establishment in Penzance of a geological society (The Royal Geological Society of Cornwall), a society that has earned a high reputation by the labours of its members, chiefly directed to investigate what is most interesting in the rock formations of the county, and their rich mineral contents.

can do nothing but increase our debt, will be speedily terminated.

A happy new year, and many, is the sincere wish of

Your very affectionate son,

H. DAVY.

To the Same.

Nevot's Hotel, Clifford Street, London, May 5, 1815.

My dear Mother—You will have heard from John of our safe return. I wrote to you from Naples and Brussels. I hope you received my letters.

We have had a very agreeable and instructive journey, and Lady Davy agrees with me in thinking that England is the only country to *live* in, however interesting it may be to *see* other countries.

I yesterday bought a good house in Grosvenor Street,¹ and we shall sit down in this happy land.

I beg you to give my best and kindest love to my sisters, and to remember me with all affection to my aunts.

I am, my dear Mother,

Your very affectionate son,

H. DAVY.

My Lord—In addressing your lordship, I am actuated by no other motive than that of patriotism, by no other interest than the well-being of civilized society, and by no other personal feeling towards yourself, except the wish that by promoting the glory of your country, you may gain undying honour.

¹ Number 23.

I have witnessed, my lord, the impression of sentiment of a great number of the most enlightened and respectable part of the community, including persons of very different ranks, not only in London, but in various cities and country towns of England, on the great political events that are now passing ; and I am convinced that there will be a most severe disappointment, a great fermentation in the public mind, and a state of feeling dangerous to the government and fate of the country, if the glorious future of the present moment is not applied in giving permanent peace to Europe, by destroying the military power of France, diminishing her territory and resources, and removing those idols of her vanity, by means of which contributions are levied in Europe even in time of peace, and which constantly remind the people of their claims to empire.

No one can reflect on the events of the last five-and-twenty years, without feeling sure that the military spirit of Jacobinism—that is to say, a desire of power and wealth, without the curb of principle or of reason—has not been limited to any one description of people in France. The same men who under the Directory made war upon social order, destroyed the sacredness of property, and in republican forms introduced anarchy, in order to sanction plunder, as the most desperate robbers become incendiaries ; the same persons under the empire sought for laws to secure what they had acquired by spoliation, and to apply to foreign conquest the system by which they had destroyed the happiness of their own country to the ruin of that of other countries. Buonaparte and the army are no more than the expiatory sacrifices of France. The sins of the people are laid upon the head of the scape-goat and of the peace-offering, but the nation itself is guilty. The French people never opposed the system of the Corsican robber till he was deserted by fortune. There were no remonstrances either from the Senate or from the Legislative Body, against the seizure of Piedmont and Geneva, against the destruction of the Italian and Dutch republics, against the

nefarious usurpation of Spain, against the partition of Prussia, and the ruin of Germany. As long as the plunder of towns and palaces flowed into Paris, as long as Departments were annexed to France, préfets and douaniers appointed, and majorats distributed, so long was joy and satisfaction. Napoleon was called *Le Grand*, statues were erected to him, temples inscribed with his name, and towns were founded amidst songs of triumph, in honour of the conqueror of Jena, and Austerlitz, and Wagram.

The French look back, my lord, with exultation to the reign of Louis XIV.; and why? because during that reign their frontier was extended. It gratified their desire of conquest, and though France was drained of men and of treasure during his reign, yet the acquisitions in Flanders granted by the folly and weakness (I may almost say wickedness) of the English Court at the treaty of Utrecht, have always flattered the pride and spirit of usurpation in France.

The state of Europe would have been very different during the last century, if the wars of 1689–1700 had ended in the result which Marlborough would have given to them—a separation of territory from France. Nothing is so dangerous as to reward unprincipled ambition: the plans of a Bourbon were pursued with greater resources and talents by a Buonaparte, and unfortunately the treaty of Paris honoured them with similar success. France, that had plundered Rome, Florence, Turin, Venice, and Berlin; that occasioned the burning of Moscow; that by unjust wars had extended her dominions from the Straits of Gibraltar and Messina to the North Sea, from the borders of Turkey to the confines of Russia; was rewarded for her aggressions by an increase of frontier; her conquerors, too generous, left the capital full of the remnants of their former defeats.

What has been the consequence of this mercy? another struggle for empire more unprincipled than the last. The Bourbon who had conciliated Europe with France, was driven

out, and peace was demanded by a man brought back to France, because the people saw in him a security for war. It is pleaded that he was recalled by the army alone, but the Champ de Mai proves that *his system* was in the hearts of the people; and the majority for an act which must be considered as giving legitimacy to his government, was, to the minority, as three thousand to one without the army.

France, insane from the spirit of the conquest, hoped either that Europe might be lulled into peace, till she was prepared for war, or that by one victory over the people who were the life of the coalition, it might be dissolved, and that Belgium, Holland, Germany, Europe, would be again open to French arms. The invincible spirit of the Britons, the genius of Wellington, and the ardour of the Prussians, have disappointed them. The French are again conquered, and are again ready to escape from punishment, by making new treaties, by expelling the man for whom they had sworn to die, and by receiving the man they had sworn never to accept. You cannot, my lord, believe them, you cannot trust their oaths. Unless the Allies wish for a new war, they must have some other pledges from France than treaties and oaths, something more solid than paper, something more fixed than the breath of words.

The treaty of Paris sanctioned to a great extent the Revolution, and the measures taken during the reign that followed it, rewarded the men who for twenty-five years had been employed in disturbing France and Europe. It confirmed the honours and wealth of those persons who had been the instruments of a tyranny degrading to France, and dangerous to Europe. Whom did Louis XVIII. choose for his ministers? Were they pure and highly principled men? No! he adopted talents without principle, or favourites who had neither principle nor talent. Amongst his councillors will be found persons who had exiled him and his family. In the first speech he made, he complimented those marshals whose only merit with

him ought to have been, that they had betrayed their late master, in what they had done for the glory of France. He flattered that army which had so long prevented him from occupying his throne, and which was soon to make him descend from it; he exulted that he had preserved for France the works of art plundered from other nations; and described as proofs of legitimate glory, what he ought to have stigmatized as marks of revolutionary shame.

We know what has followed: by endeavouring to conciliate the Jacobins, he exposed himself to their reproaches; his vaunts of the strength of his army did not prevent them from choosing another chief; and his selection of a hypocritical and unprincipled Machiavelian, supposed to be full of cunning, for his prime minister, did not lead to the unravelling of the simplest plot by which a state was ever overturned.

It would seem that the Bourbons do not profit by experience, and that what was applied to them by their great enemy, that "they learn nothing, and forget nothing," is strictly true. Talleyrand and Fouché are at the head of the French ministry; propositions are making to the army; the marshals are crowding round the sovereign they have often neglected and once betrayed. The whining and canting about the monuments are again repeated, and the magnanimity of Alexander is employed in preventing a brave, a loyal, an injured people from destroying trophies wrested from them by gigantic force, and necessary only to keep awake an insulting vanity.

I cannot, my lord, describe the conduct of the House of Bourbon, without being carried away by my feelings. I can compare it only to that of the panther, which armed with force and swiftness, suffers himself to be fascinated by the snake he might avoid or destroy, submits himself to its influence, is stupified by its poisonous breath, and crushed by its embraces.

Whoever knows the French people, knows that it is impossible to depend on their gratitude, and that they are not influenced by kindness: irregular in their affections, capricious in

their feelings, without public spirit, their ruling passions are selfishness and vanity; and by these they are kept in continual agitation. Their selfishness may be compared to gravitation, which tends to preserve them attached to the common centre, France; their vanity to the projectile force leading them on to distant conquests; but even these two powers are never in equilibrium—they produce no harmonious movements, no results that can be submitted to calculation.

There is only one circumstance to be depended on in France, that is weakness, or a total inability to check her neighbours; this is the only security for *peace*. Give her her own frontier, and her Jacobin army, and whether under a Bourbon or a Buonaparte, she will soon make war. Belgium is too worthy a prey to be neglected. Suffer her to keep the riches acquired by conquest, and they will constantly be stimuli to new aggression. Let the monuments robbed from Italy remain in the Louvre, and they will constantly remind the people of the approach they made to universal empire; they will remind them of the weakness of Italy, and even of Europe when divided, and of the strength of France.

The Bourbons can offer no guarantee for peace except in their own will, and Europe has experienced how feeble this is. They can offer no security by appointing revolutionary ministers. The confession of her weakness is a reason why the Allies ought to depend upon their own strength. The French, after their multiplied perjuries and atrocities, ought to consider it a mercy that their cities are not burnt, and their country divided; they ought to consider it a mercy that they do not suffer the fate of that people whom they resemble in so many particulars—the Jews, when Jerusalem was destroyed by Titus, and the name made a reproach amongst nations.

My lord, I need not say to your lordship, that the *Capitulation* of Paris is not a treaty; but everything belonging to the future state of that capital, and of France, is open to discussion, and that France is a conquered country. It is the

duty of the Allies to give her more restricted boundaries, which shall not encroach upon the natural limits of other nations; to weaken her on the side of Italy, Germany, and Flanders; to take back from her by contributions the wealth she has acquired by them; to suffer her to retain nothing that the republican or imperial armies have stolen. This last duty is demanded no less by policy than justice. Paris has no claim to the dignity of being a capital sacred to the arts, and the climate is unfavourable to the conservation of those monuments. They belong to those countries in which they were produced, and which were so long sacred to them; where they filled temples worthy of them, and were associated with noble recollections; where they served not merely to guide the taste of the artist, but to kindle in all liberal minds the love of immortal glory, showing that the dead are more imperishable than the living.

The immorality of Paris, the unprincipled nature of its population, the uncertainty of its government, all render this city highly improper to be the *museum* of Europe. Besides, why should France exclusively have the advantage of levying contributions on the tasteful and curious, the student and the connoisseur, who may wish to examine the works of Italy and Greece? The right of conquest is transferred, the right of justice should now be suffered to prevail, and those possessions, which are more important than territorial ones, should be restored to enrich their native country, which has scarcely any species of wealth. As connected with a revolutionary system, as tending to recall circumstances which ought to be hateful to legitimate authority, the King of France ought to urge their removal. The first wish of a man, who, after being driven from his house by robbers, finds it crowded on his return by goods plundered from his neighbours, ought to be to make full restitution.

If, my lord, different principles are not adopted from those which were acted upon in the treaty of Paris; if the immut-

able laws of justice are not revered ; if rewards are offered to usurpation and rebellion ; and if those who having failed in becoming sovereigns are permitted to retain wealth and honours ; if the virtuous and vicious are blended, and those who ought to perish on scaffolds are placed as ornaments to a throne, then will there be an end to order, and peace, and liberty in Europe, and the crimes which will arise from the mistaken lenity and false policy of the Allies, must like a contagious disease spread into their own countries. Those who have nothing to lose, and everything to gain, must profit by the example ; and Jacobinism, the opinion that strength and talents may form their own *peculiar laws*, and acquire property after their own fashion, sanctioned by legitimate sovereigns, will become the popular doctrine of Europe.

I shall conclude this chapter with some passages from his note-books, written at this period, partly descriptive, partly reflective, and with a copy of verses of the same date, a portion only of which—that relating to Pæstum and Eboli—has ever before been published.

Liguria—Sestri—March 8.—In our journey here yesterday from Genoa, observed the magnificence of the site of Genoa, with its rocks of serpentine marble, and its secondary strata of limestone, and its palaces extending along its shores, and the Apennines round it, and the Alps in the distance. The Apennines not so craggy ; almost everywhere covered ; but their outline very fine and bold.

May 24, 1814.—Returned to Rome this day, after a very interesting journey to Naples and Pæstum. We left Rome

Saturday, the 12th of May. The first part of the road was over volcanic matters till we reached the Pontine Marshes, where the Apennines burst upon us in mountain greatness and beauty of form. La Cava, the Alban Mount, the Lake of Nemi, and all the territory in the neighbourhood of Rome is volcanic. The tufa is a species of travertine—decomposed basaltic rocks or pozzolana, cemented by calcareous cement from water, water impregnated with carbonic acid. The Apennines are all calcareous, stratified, their bases covered with travertine. Not far from Caserta we met again the volcanic district, which reaches to the foot of Vesuvius; but the mountains on the other side of the Bay of Naples are calcareous, and all the mountains along the coast to Pæstum are of the same kind. At the foot of these mountains, formations of travertine appear in many places, from the waters descending from the Apennines. One river, which we crossed by a boat, four miles from Pæstum [the Silaro], was celebrated by the ancients for its petrifying qualities.¹ The plain on which Pæstum stands is formed of travertine. From a little lake or tank near the ancient gate, containing recent deposits, I took some water, of which four cubical inches evaporated left 4·9 grains.

Pæstum is a very interesting spot—the ruins of the three temples very magnificent. Here Grecian art of the elder time is seen very little injured, whilst the Roman art has passed away. I suppose the columns are about twenty-five feet high in the temple of Neptune—the most ancient Doric, and all of travertine—a stone probably formed only a very short time before it was used for the building.

The base of the limestone hills of the Apennines, between Vesuvius and Pæstum, are all clothed with the most beautiful vegetation—vines that ascend to the very top of elms, corn and flax beneath, and, in some sheltered glens, orange and

¹ Pliny, Lib. II., cap. ciii.

lemon trees. It seems as if the soil is favourable to culture. The Indian corn grows here, but as yet was not half a foot high, and as yet no corn has changed colour.

I saw Vesuvius from a spot about two miles from Pompeii. I never beheld a more magnificent prospect than this presents: Naples rising in majesty above the sea; the hill of Posilipo above it, Capri stretched below my feet; Ischia blue in the distance, and the promontory of Misenum purple in the evening light. The base of Vesuvius is rich in vegetation beyond description, and the summit black, frowning, and sending into heaven its columns of clouds, red near the mountain, white and purple above. In the east appeared the hills round Salerno, and the mountain of Castellamare stretching into the sea, and apparently loftier than Vesuvius, of the most beautiful form.

This country is Nature decorated as for a festal day. The remembrances of Pompeii and Herculaneum most interesting—towns preserved by fire—but the last as yet reserved for future ages, for the living protect the dead—it is impossible to dig without injuring the city above.

There is very little crystallized lava in the neighbourhood of Vesuvius; but the ancient lava, that which is below the modern, contains a great variety of crystallized substances: in one specimen in possession of Monticelli, I saw basaltic hornblende, sommite, and mica, or at least thin plates exactly resembling mica. These lavas likewise present distinct crystals of hornblende and felspar; and in Somma there is an immense mass of lava which has been fused under great pressure, and probably cooled out of the contact of the air.

The fumes which constantly rise from the crater of Vesuvius are water, probably a deposition from the air, and muriatic acid. Near the crater there is a strong smell of sulphurous acid. The yellow matter, which might be mistaken for sulphur, is iron dissolved from the lava by the muriatic acid gas and water. I saw no sulphur in any part of the crater

that I examined. In the night we saw the flame spring out of an aperture in the upper part of the crater, with immense violence and noise, and enormous volumes of smoke. The light was red like that of a common bonfire, the products apparently elastic matters, water, and sulphurous acid, and carbonic acid. No dust, alkaline or earthy.

Do not the ashes which cover Pompeii indicate a combustion of the metals of the earths?

In examining the theatre of Herculaneum, an interesting fact—marble under thirty feet of lava unaltered.

The Solfatara, an ancient crater; towards the north-east side elastic matter escapes in great abundance, principally the vapour of water, with some sulphuretted hydrogen; great quantities of cinnabar and sulphur, fumes of vitriolic acid, and plenty of sulphate (crystals) of alumine. The soil here everywhere whitened by acid fumes.

Lake of Agnano; examined the elastic fluid disengaged in this lake near the Grotta del Cane;¹ found carbonic acid nearly pure.

Montenuovo: no crystallized lava; principally ashes, cinders, and decomposed lavas.

None of the recent lavas that I have seen are very interesting. They appear to have been considerably cooled before they were poured forth, and to contain an immense quantity of mechanical mixtures. I have observed no regular crystals in any of them, except the olegistic iron ore, which seems to be a sort of secretion from the lava, at the time it was still soft.

It will not be difficult to make the contrast between Eboli and Pæstum. The terra lavorata, the music, the motion, the life of Nature; the solitude, the desolation of the ruined city,

¹ That celebrated spot, so well known to the crowd of travellers, but with a higher claim to interest, as it was there that proof was first obtained by Van Helmont of the existence of an air, *sui generis*, distinct from common air, which he called "Gaz Sylvestre."

the sea, its swelling waves, marking its sure changes ; the evening star and the moon ; the lake, where there is now no life.¹

On my return to Rome this day, 24th, witnessed a novel and impressive scene. The enthusiasm for the return of the Pope has awakened even the Romans, and tumultuous joy and triumph are expressed by all classes.²

“February 4, 1814—Tivoli.—All the rocks immediately about it are stalactitical. Probably the exit of the Anio formed by volcanic forces. Four cubic inches of the water at Terni gave two-tenths of a grain of residuum, chiefly carbonate of lime.

“The Solfatara lake highly interesting : water of the mean temperature probably ; now not a furlong over ; floating islands formed by weeds. The power of vegetation so active in this lake in consequence of the carbonic acid, so that carbonaceous matter is constantly deposited. Query : does not the hydrogen of the sulphuretted hydrogen assist the decomposition of the carbonic acid ? How remarkable are concretions which are ever in progress in this and the next lake ! Almost all the plain between Rome and Tivoli of like formation—of the nature of stalactite.”

“The territory of *Rome* highly interesting. Lava and travertine, the known productions of fire and water, are its elements ; and the monuments which have lasted the longest of human works are formed of materials of comparatively recent origin.”

“Our artificial science has relations to the *forms* of *Nature*, but yet that which is most important in *Nature*, *life*, is above our *science*.”

¹ See further on, where these impressions are described in verse.

² Pius VII., on his return from France. See “Consolations in Travel,” dialogue iii., in which the event is described.

“Men generally find it most easy to explain everything who are ignorant of everything. The progress of physical science is slow but not sure. Probably the atomic philosophers had an idea exactly like that of the moderns; Democritus, the pure atomic doctrine; Pythagoras, the doctrine of definite proportions and of *regular* forms.”

“False hypotheses may be compared to monster-flowers, which produce no fruit; rational ones to the small and modest flowers of the palms, which produce large and delicious fruit—their flowers scarcely perceptible.”

“The changes taking place in Nature are calculated to excite our admiration where we perceive the various transmutations of matter: transparent water becomes opaque snow; mountains and rocks decompose; vegetable substances are formed from the atmosphere and soil; water is precipitated from the air, where there was no proof of its existence.”

“Astronomy teaches us to reason on and weigh those masses of matter which, though placed at an immense distance from us, are still visible. Chemistry in its ultimate improvement will probably offer us a more *sublime* exhibition of the powers of the human mind in demonstrating to us the forms and magnitudes of those molecules of matter which are invisible, and of which the existence is proved by reason aided by experiment.”

“The astronomer vainly asserts the perfection of his science, because he is capable of determining the motions of seven planets and twenty-two satellites, but comets and meteoric bodies, which even move in our system, are above his reach; and even this solar system is a speck in the immensity of space! and what suns and worlds are there not beyond it!”

“Our science (chemistry) refers to the globe only, and in this there is an endless field for investigation. The interior is unknown—the caves of volcanoes. We have just learnt some truths with respect to the surface; but there is an immensity

beneath us: Geology is, in every sense of the word, a superficial science."

"Chemistry has had a philosophical form only since the labours of Lavoisier. The principle which this great man made the foundation of the science, was to admit no body to be composed of which the elements had not been procured. Since his time some attempts have been made by the French school to adopt a different plan of reasoning. Scheele, in distilling muriatic acid—a solution of an acid gas in water—from oxide of manganese, which was known to consist of oxygen and a peculiar metal, obtained chlorine; but there was no statical evidence that the result depended upon a combination of the acid gas with oxygen. To have made the experiment conclusive, it should have been shown that the gas increased in weight. M. Berthollet, in exposing a solution of the new gas in water, found that it gave off oxygen gas, and that the water contained the muriatic acid gas: hence it was concluded, that, both by analysis and synthesis, the gas of Scheele was compound; but, as no *statical result* was gained in the first experiment, so no statical result was gained in the last, and, therefore, the whole evidence was invalid: yet, in all the books of chemistry, a number of imaginary results were supposed; it was said that whenever bodies were burnt in chlorine, oxygen was separated, and oxidated compounds, muriates formed, &c."

"Necessity of more rigid reasoning in chemical philosophy."

"Those effects, which in common language are attributed to *time*,—those changes, the cause of which is represented by a word which signifies the measure of duration, are in fact chemical. For water, which is deposited from the atmosphere, dissolves certain parts even of rocks and stones. Even the whitest marble contains iron in a form capable of being acted on by the air. Metals are rusted and dissolved. Colours are changed by light. Wood decays from an effect, which is the

same as that of slow combustion ; and lime is most perishable. All the monuments of art—all that is immortal in design, and ought to be immortal from the expression of thought, decays and melts away ; and barbarian warriors are less dangerous than those laws which are established for the conservation of our system. It is only by means which are accidental, and most unexpected, that the course of change is arrested. The manuscripts of Herculaneum were saved by that cause which might be supposed the most destructive—fire. Even the pyramids of Egypt will yield, as well as the buildings of Rome, and have no more right to endless duration, than those called by their proud founders eternal.”

From depth of feeling, and from depth of thought,
Rises the purest strain of poesy.

Though youth is fled, and all the twilight hues,
And rosy tints, and freshening morning dews,
Imagination gives—yet lingering stay
Some transient light of *fancy's* noontide day.
Still may past scenes delight, and memory cheer,
And while away the long revolving year.
Take, then, this lay, my loved, my dearest friend,
The best a weak, a laggard muse can send,
Whose heart is warm as in the days of old,
Though many visionary hopes are cold ;
Were but his powers as his affections strong,
Lofty should be the verse, an everlasting song.
Let us, whilst chilly clouds invest the sky,
In *fancy* to another climate fly ;
Let us on *memory's* downiest pinions rove
Through the fair valleys of the land we love.
I close my eyes—and lo ! in placid dream,
Before me winds Volterno's limpid stream,

Now blue and cold, and as the sapphire bright,
Now glowing with the evening's ruby light.
I view the windings of its varied shore,
With myrtle and with cistus covered o'er ;
Within its glens see brighter trees unfold
Their silver blossoms, or their fruit of gold,
Trees that in winter as in summer bloom,
Whose flowers and fruits together shed perfume,
Emblems of promised immortality,
When hope and joy in one fruition lie.
Lo, the aerial mist, which zephyrs warm,
Exalts the rugged mountain's awful form,
Sends into distance its embattled towers,
And gives a mystic softness to its bowers ;
E'en the dark pine, and darker ilex, glow
As if a wreath of myrtle crowned its brow ;
The marble cliffs assume a purple hue,
Their snowy summits melt in heavenly blue.
Where yon low ruins glimmer through the wood,
Thy mighty walls, luxurious Capua, stood ;
Gone are thy palaces, thy temples low,
Upon thy streets the rude acacias grow,
Wild roses there midst stunted roses bloom,
Fit emblems of that place where pleasure's reign,
Saved Rome—made Cannæ's bloody triumph vain ;
Where, on seduction's couch of roses tost,
The empire of the world the hero lost.
Ah ! who can wonder that in such a spot
Ambition's bloody visions were forgot,
And that soft passion's genial influence stole
The sterner love of glory from the soul !
Here all combine the active powers to calm ;
Scents as of Paradise the air embalm ;
Eternal is fair Nature's festal dress ;
To breathe is life, and life is happiness.

I pause, but quickly pass to Umbria's shades,
Her groves of cypress, and her sylvan glades,
Where, as the broken mountain crags impend,
We saw Velino's mighty waves descend
In thunder and in foam, whilst clouds of spray
Bedimmed the sunshine of a summer's day,
And made a dewy and refreshing shade,
On which the brilliant iris ever played
Below ;—we saw the rainbow crown our head
Above,—beneath our feet its radiance spread.
Fixed to the spot we loitered, lingered on,
Till the last westering purple ray was gone ;
Then the pale moon which beamed serenely bright,
Dimming the fire-fly's scintillating light,
Guided us here in moralizing mood,
Seeking comparisons from that wild flood,
And human life, which proud of youthful force,
Impetuous and resistless makes its course,
With all the mighty cataracts, foam, and noise,
Untuned its passions, unsubdued its joys ;
But fears to hopes succeed, to transports pains,
And soon the deep and silent pool it gains,
From sunshine quickly passes into shade,
Its fancies like the rainbow's glories fade,
And mists that trembled with the radiance bright,
Fall as the cold unhealthy dews of night.

Never shall I forget the happy hours
We passed in Eboli's enchanting bowers,
Midst palms, and orange groves, and new born flowers.
Far in the west Salerno's villas spread,
Lucana's mountains rose above our head ;
No single cloud obscured the summer sky,
And yet the wind was turbulent and high,
And full it blew upon the Tyrrhene sea,

That rose sublime in billowy majesty,—
Its waves arose, but not in stormy hue,
For pure as heaven was their ethereal blue,
Save where they beat the shore in crested pride,
White as the snow upon the glacier's side.
Though loud their murmuring 'midst the mountain trees,
Yet tuneful Philomel, as if to prove
More loud as well as sweet the voice of love,
Poured from the caruba her thrilling song,
The music of a minstrel wild and strong,
And gentle turtle doves, in thicket nigh,
Heaved, scarcely audible, the broken sigh;
The gale was from a Zephyr's softest wing,
The air was that which summer steals from spring;
Life seemed in every moving thing to be—
The blades of maize, the blossom on the tree,
The cones that rattled on the giant pine,
Seemed stirred by impulse of a power divine.

Now pass we on to that deserted strand,
Where Pæstum's long forgotten ruins stand;
Where, glittering in the sunbeams, rise on high
The monuments of ancient majesty,—
Temples, whose massive forms and finished grace
Speak of the labours of a Grecian race.
Was this the dwelling of the Sybarites,
The people formed for love and soft delights;
Who built their cities for eternity,
And lived as if to-morrow they should die;
Who counted festive joy in every thing;
Whose roses bloomed in autumn as in spring;
Who round the fruitful olive raised the vine;
Whose fountains poured profuse Ausonian wine?
All, all is gone, save monumental stones,
That press the vanish'd people's mouldering bones.

CHAPTER VI.

FROM HIS RETURN FROM HIS FIRST CONTINENTAL TOUR
IN 1815 TO THE COMPLETION OF HIS SECOND IN 1820.

THIS short period, like the preceding one, was similarly and not less variously occupied; and as regards science, even with more devotion and brilliancy of success, for his labours were rewarded by the discovery of the safety lamp—a discovery in itself of inestimable value, and which led to his further researches on flame, yielding results of peculiar interest, as illustrating many singular qualities of flame, and its nature.

It was very soon after his return from the continent, viz., in the August following, that his attention was first called to the dangerous and too often destructive “fire-damp” of the collieries, with a hope, fortunately not entertained in vain, that he might be able to offer a remedy. When his aid was asked, he was in the Highlands of Scotland on a shooting excursion: on his way back, he stopped at Newcastle, the capital of the coal district; made minute inquiries into the circumstances of the mines, in connexion with the terrible and invisible agent, and had specimens of the gas, the light carburetted hydrogen

of which the "fire-damp" consists, bottled and sent after him to London. In the middle of October he began the experimental investigation, and before the end of the month, after about a fortnight's careful inquiry, he had the inexpressible satisfaction of accomplishing his object, and was able to announce the protecting principle.

The following letter from Sir Joseph Banks was in reply to one from him, which I have not succeeded in obtaining, communicating the discovery :—

October 30, 1815.

My dear Sir Humphry—Many thanks for your kind letter, which has given me unspeakable pleasure. Much as, by the more brilliant discoveries you have made, the reputation of the Royal Society has been exalted in the opinion of the scientific world, I am of opinion that the solid and effective reputation of that body will be more advanced among our cotemporaries of all ranks by your present discovery, than it has been by all the rest.

To have come forward when called upon, because no one else could discover means of defending society from a tremendous scourge of humanity, and to have, by the application of enlightened philosophy, found the means of providing a certain precautionary measure effectual to guard mankind for the future against this alarming and increasing evil, cannot fail to recommend the discoverer to much public gratitude, and to place the Royal Society in a more popular point of view than all the abstruse discoveries beyond the understanding of unlearned people. I shall most certainly direct your paper to be read at the very first day of our meeting.

We should have been happy to have seen you here ; but I am still happier in the recollection of the excellent fruit which was ripened and perfected by the very means of my disap-

pointment, your early return to London. I trust I shall arrive there on the morning of our first meeting, and that it will not be long after before I have the pleasure of seeing you.

I am, my dear Sir H., always faithfully yours,

JOSEPH BANKS.

Of the manner in which the safety lamp was received by those most competent to judge of its value, I need not at the present time enter into particulars: these will be found in the Memoirs of his Life, and with great minuteness and accuracy of detail in Dr. Paris's work--would that the whole of that work had been written in the same candid and liberal spirit! then it might have deserved the praise of "a most felicitous instance of perfect biography," bestowed on it from the chair of the Royal Society. The following hurried letter to Lady Davy, in which a copy of an address to him is given, may have a place here, as an example both of the grateful feeling entertained, and of the gratification the expression of that feeling afforded him. It was from the same respectable proprietors of collieries, from whom shortly after he received a present of plate, a dinner service exceeding in money value £1,000, and which he valued most for the manner in which it was offered.

Here it may not be unworthy of mention, that the first gun with a percussion lock seen in the North of England, was one he brought with him on this his visit to Newcastle; and that he gave proof of its

superiority by killing a black-cock in heavy rain, the first he ever shot. My informant is a gentleman, distinguished in his profession,¹ then a boy, and who still remembers with interest his excited feeling in seeing a "philosopher."

To Lady Davy.

Newcastle, Monday, March 23, 1816.

I have just received the deputation from the coal owners. Nothing could be more gratifying than the expression of their feeling. I shall copy for you the letter they have addressed to me:—

"Sir—As Chairman of the General Meeting of Proprietors of Coal Mines upon the rivers Tyne and Wear, held on the 18th instant, I was requested to express to you their united thanks and approbation for the great and important discovery of your safety lamp, for exploring mines charged with inflammable gas, which they think admirably calculated to obviate the dreadful calamities, and the lamentable destruction of human lives, which of late have so frequently occurred in the mines of this country.

"They are most powerfully impressed with admiration and gratitude towards the splendid talents and brilliant acquirements that have achieved so important a discovery, unparalleled in the history of mining, and not surpassed by any discovery of the present day; and they hope, that whilst the tribute of applause and glory is showered down upon those who invent the weapons of destruction, that this great and unrivalled discovery for preserving the lives of our fellow-creatures, will be rewarded by some mark of national distinction and honour.

"I am, Sir, your most obedient servant,

"GEORGE WALDIE, Chairman."

¹ Dr. Charlton, of Newcastle.

He continues:—

We dine here to-day, and proceed on our journey to-morrow.

Every part of your letter was gratifying to me except the melancholy news. This, I think, is the great evil of life. We lose our friends as soon (often) as they become linked to us. They drop off like the leaves of the evergreen at different seasons, and every new loss creates insecurity.

My dearest friend, God bless you! Continue well and happy.

H. DAVY.

Address a line to me at Stilton, for except at this point our route is uncertain.

Rather more than two years later a Baronetcy was conferred on him, which, he being without children, became extinct at his decease: the plate, however, I venture to hope, may remain an heir-loom in his family; it was bequeathed to me after the death of his widow, on the condition of my having the means to use it. The patent of the Baronetcy bears the date of the 18th of January, 1819. Though, no doubt, he was gratified by the honour it conferred on him, he did not, I am sure, attach any undue importance to the rank. In none of the letters remaining addressed to his nearest relations, do I find it mentioned, or the slightest allusion made to it. It is curious to see how, in the composition of the document, occupying two sheets of parchment, his special services are altogether neglected, and qualifications are introduced to which he had no claim, such as “eminent family inherit-

ance and estate." But in the wording, probably the omission was unavoidable, one formula, it is presumed, always being followed, thereby rendering the patent commonplace, destitute of interest, and of power even as a stimulus to meritorious deeds.

This patent of honour was one for which he had to pay a certain sum in fees: he was urged by many of his friends to take out another, which would amply enrich him, a patent for his lamp; but this he declined; he preferred making it, to use his own words, "a gift to his country."

Now, after the lapse of more than forty years, it is satisfactory to find, especially after all the cavils made, that the lamp maintains its reputation for safety unimpaired. Such competent and impartial judges as the late Mr. Buddle and Mr. Dunn, Government Inspectors of Collieries, are my authorities for this statement. In a note, with which I have been favoured by the latter gentleman, as recently as the 14th of August, 1857, I am assured that the original lamp, almost without a single alteration, other than that which its inventor suggested, has continued to be employed, and with undiminished confidence. Indeed, it is the admirable simplicity of the lamp, with its security, that is its great recommendation, and always must be—a wire gauze structure, such as it is, and no more, imprisoning flame, owing to the wire in its fine mesh preserving a temperature below that required for the inflaming of the "fire damp," and so preventing the passing of the inner illuminat-

ing flame of the lamp to the outer inflammable atmosphere. Mr. Playfair, in an eloquent article on the subject, which appeared in the *Edinburgh Review*, speaks of it, in relation to its construction and properties, as "exciting a degree of wonder and astonishment, from which neither ignorance nor wisdom can defend the beholder;" and "when to this we add," he continues, "the beneficial consequences of the saving of the lives of men, and consider that the effects are to remain as long as coal continues to be dug from the bowels of the earth, it may fairly be said, that there is hardly in the whole compass of art or science a single invention of which we would rather wish to be the author."

Here, I do not think it necessary to revive the discussions respecting the safety lamp as to priority of discovery: I more particularly allude to the claims made by the friends of the late Mr. Stephenson; inasmuch as the lamp which this remarkable man invented, was, as admitted by himself, formed entirely on mechanical principles, and had no pretensions to safety, till constructed after the manner of the "Davy lamp." His biographer, in writing his eulogy, I regret to see, has lost sight of justice; and in exalting one character has endeavoured to lower the character of another.

Among the following letters, written about this time, many are to members of his family, which may appear trivial. If an apology is needed for giving them, I would offer it on the ground that the estima-

tion of character must be founded on little things as much as on important events—perhaps even more so;—and, as his character has been exposed to certain charges, there seems to be, and I hope it will be admitted, a special reason for inserting them, in proof of his endearing attachments to his relations and old friends. He himself had the firm belief that high intellectual excellence is naturally associated with strong family affection and love of friends, and he has expressed it in delineating the character of a man whom he dearly esteemed as a friend—the late Mr. Playfair—a biographical sketch of whom I have found in one of his note-books; it will be presently given.

To his youngest Sister.

June 1, 1815.

My dear Betsy—I have received your kind letter. It is not improbable that had your letter arrived before John's plans were fixed,¹ that he would have hesitated; but he was at Ostend before I received it; and now it is too late to change his views. Should he not like the service, however, the situation at Penzance is a resource; and it will always be in his favour, as a medical man, to have seen practice in the army. It is, indeed, very possible that the campaign may be finished, and he on his return long before Dr. Paris² gives up Penzance, and if so, it will be a subject of consideration. For my own part, I do not think that Bonaparte and his diabolical

¹ I had just before entered the medical department of the army.

² The late President of the College of Physicians, the same who wrote the life of my brother, without any sanction from, or communication with, me.

adherents can long oppose the allies ; and the French are too selfish to adhere to him for any other reason than the hope of plundering their neighbours. John had a tedious passage, but landed quite well, and writes to me in excellent spirits.

I write this letter to inform you of his safe arrival on the continent.

I am, with kindest love to my mother and sisters,

Your ever affectionate brother,

H. DAVY.

To his Brother.

January 8, 1816.

My dear John—I called on Sir James M'Grigor a few days ago, and told him that you had not been gazetted. He promised me that it should be done immediately, and dated November 9th, and this morning I saw you in the Gazette.¹ I congratulate you.

There is no notice of any ship about to sail.² I shall go to the Admiralty again to-morrow, to endeavour to get you from the Secretary a passage in a King's ship, which will be free of expense. As soon as I hear anything decisive, I will write to you.

I hope in a few days to have the house in order. I do not regret that you have not been in London during the Christmas ; Lady Davy has been so unwell, that all our arrangements have been at a stand. She has had almost constant attacks of spasms in the stomach, but they have lately been less violent ; and she is almost convalescent, but very feeble, and much reduced by the pain. I have, however, strong hopes that the disease is radically cured.

I have been able to make a lamp which burns explosive

¹ As assistant surgeon to the forces.

² I was then under orders for Ceylon, to which I shortly proceeded.

mixtures of gases, and gives light in them, and which will effectually preserve the miners.

I beg you will give a one pound note from me to Mary Launder.

With kind love to my mother and sisters,

I am, your very affectionate brother,

H. DAVY.

To his Mother.

- Christmas Day.

My dear Mother—A merry Christmas and a happy new year to all our family at Penzance. Pray thank Grace very kindly for her letter. Lady D. joins me in the congratulations of the season. She is, I am happy to say, better.

We go to the Earl of Darnley's for new year's day, and shall be settled in town in the middle of January.

I am still working for the public good, and I hope with success.

I enclose £5. I wish Mary Launder to have 20s., Jenny Victor 10s., Jacob and Antony Gandy 5s. each. The rest my sisters will dispose of as they like—I hope in charity.

Have you sent the minerals? I am, my dear mother,

Most affectionately yours,

H. DAVY.

In another letter to his mother he says:—

“It is true that the colliers are getting made for me a piece of plate. I know not the value of it, nor do I care much; it is not to be less than 1,000 guineas; but it is the nature of the present, for saving the lives of my fellow-creatures, that I value.”

To Professor Edmund Davy.

Cobham Hall, January 13, 1817.

My dear Sir—I have received your paper.¹ I think it will be read on Thursday. * * *

I saw with much surprise, in some of the late English papers, the process of improving bread by magnesia referred to me. Your letter showed me the reason of this misnomer. I have endeavoured by all the means in my power to give it to its true author. I have made some experiments on corn, but none on the effects of the alkaline substances upon the damaged corn. Carbonate of soda has been much recommended in England.

I am surprised you did not explode mixtures of hydrogen by the safety lamp. It requires a much finer tissue to prevent this explosion than that of fire damp. By certain tissues *all explosions* may be prevented.

In a paper read last night at the Royal Society, I have shown the *causes* and the limits of security, which may in all *cases* be made *absolute*.

It will always give me much pleasure to hear of your success and well being. I am, my dear Sir,

Yours very sincerely,

H. DAVY.

To his Mother.

Kirkwall, Orkney Islands, August 12, 1817.

My dear Mother—My sister Kitty's letter followed me into Scotland. I beg you will thank her for it in my behalf. I am now in the most northern island belonging to Great Britain, and cannot send you, what I should be happy to send you, John's prescription. I shall be at Edinburgh, where I meet

¹ On a new fulminating compound of platinum.

Lady Davy, in a fortnight, and I will immediately send you the medicine.

Yesterday's mail brought me a letter from a Mr. Tolfrey, who saw my brother at Colombo, March 1st. He was quite well, and nothing can exceed the terms in which Mr. Tolfrey speaks of his character, and of the estimation in which he is held in the colony, not only by the Governor, &c., but by all who know him.

You must not expect me to say anything more respecting ——'s marriage. I have done what I believe to be my duty: it would have been delightful to me to have had a pleasant duty to perform; but though my advice is vain, it cannot be from this less reasonable nor less sincere * * *.

I hope you are quite well. I trust, my dear mother, you will not have any anxiety in consequence of my opinions on this subject. It is our duty to make the most we can of this world; and there is a Power far above our comprehension, who may produce good out of what appears for the moment an evil, and who never forsakes those who deserve well.

I am in these islands with my friend, Lord Gage: any letter addressed under cover to Viscount Gage, Edinburgh, will reach me, though, as I am 1,000 miles from you, perhaps it will be as well to direct to me in London, and my servants will send it on.

I am, with kind love to my sisters, my dear mother,

Always your affectionate son,

H. DAVY.

His second journey to the continent was undertaken with two objects in view: first, to visit the coal-mines of Belgium (the most productive and extensive in Europe, with the exception of our own), from the owners of which he had received a pressing

invitation, with grateful acknowledgment for the safety lamp, which had there rapidly come into use; and, next, to attempt by chemical means to aid in unrolling the darkened and agglutinated manuscripts preserved amidst the ruins of Herculaneum, which were in a state, as he had ascertained, approaching to that of peat, and not charred by fire, as had been previously supposed.

After visiting Flanders, he went to Vienna, descending the Danube; and from Vienna he proceeded through southern Austria to Venice.

On this journey, his attention was specially directed to the temperature of rivers and of collections of water, as concerned in the production of mist, a phenomenon which, on our rivers and seas, towards the end of summer, through the autumn, and the beginning of winter, is so remarkable, and the cause of so much delay and risk to the navigator. Universally, whenever mist appeared, he found the air above some degrees colder than the water below, and the atmosphere, antecedently, clear and calm, favourable to radiation. The results of his observations and deductions he gave in a paper which was communicated to the Royal Society, and published in its Transactions.

This, his absence abroad, was longer than he at first proposed; it was protracted till the beginning of the summer of 1820. The interval was spent chiefly in Italy—at Rome, Naples, and the Baths of Lucca;—and, as on his preceding sojourn, his time was divided between science and the muses, society

and field and river sports. The former he found in the Roman Campagna during the winter months; the latter in his favourite haunts in the Tyrol, to which he paid a visit in the early summer of 1819.

His scientific pursuits were chiefly limited to his experiments on the Herculaneum manuscripts, made at Naples, which might have been more successful had he been better supported in his labours, for the process he proposed and tried, founded chiefly on the principle of softening the matter by which the leaves are agglutinated, appeared to be well adapted to the purpose: an account of it will be found in the *Philosophical Transactions* for 1821.

At the Baths of Lucca he examined the water to which that delightful, elevated spot in part owes its attraction. He found it to contain both iron and silica, and came to the conclusion, guided by the analogy of boracic acid and its inflammable basis, boron, that silica also performs the part of an acid, and is a means of dissolving iron in its protoxide state, and of forming ochres,—the protoxide by exposure to the air passing into the insoluble peroxide.

The letters which follow are of the same miscellaneous kind as those which immediately preceded them, and may stand in need of the same apology.

To his Mother.

London, May 25, 1818.

My dear Mother—We are just going upon a very interesting journey. I am first to visit the coal miners of Flanders,

who have sent me a very kind letter of invitation, and of thanks for saving their lives.¹ We are then going to Austria, where I shall show Vienna to Lady Davy, and then visit the mines, and, lastly, before I return, we are going to Naples.

I have the commands of his royal highness, the Prince Regent, to make experiments upon some very interesting ancient manuscripts, which I hope to unfold. I had yesterday the honour of an audience from his royal highness, and he commissioned me to pursue this object in the most gracious and kind manner.

We shall be absent some months. With kindest love to my sisters and aunts, in which Lady Davy joins me, I am, my dear mother,

Your most affectionate son,

H. DAVY.

To the Same.

Rome, March 13, 1820.

My dear Mother—I have written three times to you since I heard of your accident at Marazion, but I am doubtful, from Grace's last letter, whether you have received either of my letters.

Her letter, like most human things, contained a mixture of good and bad; and the pleasure I received from hearing of your recovery was mixed with pain from the continuance of my aunt's illness. I hope fervently that she will be restored to health, and pass many happy days in the evening of life.

John is, I trust, now on his passage homewards. We are so far on our return, and I hope in the autumn we shall meet from different quarters of the world at Penzance. I have

¹ Of the 15th May, 1818, from "La Chambre de Commerce et des Fabriques de Mona." The expressions in this letter are in the highest terms of gratitude and admiration for the discovery of the safety lamp.

finished with success, and much sooner than I expected, the objects for which I came abroad. Lady Davy is not very well, and we are obliged to travel slowly, but I hope we shall be in London in the end of May or the beginning of June.

We shall return by the south of France, and if Grace should be so good as to write to me, she can address me, Poste Restante, Bordeaux.

With kind love to my sisters, in which Lady D. joins me, I am, my dear mother,

Your affectionate son,

H. DAVY.

To the Same.

London, June 16, 1820.

My dear Mother—I have been a few days in town, and I am very much disappointed in not finding my brother, who will, I hope, soon arrive. I have a letter from him, from the Cape of Good Hope, when he was quite well. Probably they have stopped at St. Helena; but I look for him every moment.

I came over in consequence of the illness of Sir Joseph Banks,¹ about the affairs of the Royal Society, rather before the time I intended. Lady Davy is on her road, and will join me in a few days.

I have been very graciously received by the King.

I shall have the pleasure of seeing you before the winter. Pray give my best love to my sisters and my aunts. I shall send by the first opportunity some coral necklaces for my sisters, and a shawl for you.

Believe me to be, my dear mother,

Your very affectionate son,

H. DAVY.

¹ He died on the 19th of June, 1820.

The following excerpts from note-books, which have lately come into my possession, belong to this period.

Playfair and Watt both died in the same year, 1819. His respect for them both was of the highest kind. The following loving sketch of the character of the former, judging from the book in which it occurs, must have been written shortly after his decease, from the impulse of warm, but not exaggerated feeling; as were also some fragmentary lines relating to both these excellent men, the first stanza of which is the following:—

Mourn, Scotland, mourn! for from thy glorious land,
Famed for heroic virtue, and the strength of manly intellect,
and heroic song,
Never sprung forth two loftier plants
Than these, thy latest dead,
Nipt by Time's winter in their mortal mould,
But in their fall around them scattering flowers
And seeds of immortality.

Character of Mr. Playfair.

There probably never was a man who combined in a higher degree the moral excellences that awaken affection with the intellectual qualities which command respect. His heart was pure and simple as that of an infant. Free from every kind of affectation, without the slightest taint of vanity, self-love in him was entirely lost in sympathy with the true, the beautiful, and the good, which in every form haunted and adorned his mind. Malignity, envy, uneasiness at the success or talents of others, never tainted his character. His expression, his language was open and candid as his soul, which was a clear

sky without a cloud, and when not filled with the direct beam of discovery, was bright with reflected light. He was contented to employ his intellectual powers, which might have commanded objects of the highest worldly ambition, in the pursuit of scientific truths and moral excellence. No man was ever freer from prejudice. Greatness and glory, in every country and in every age, seemed, as it were, to nourish his spirit, and he never displayed his talents with so much pleasure as when he was doing justice to a rival. In his geometrical researches he was at once exact and profound, and had the art, so rare in modern times, of making himself comprehensible to the meanest capacities. As a critical philosopher, his judgment was clear and unbiassed; reasons flowed from his understanding as a river from a great lake, which, however slender or impure the sources from which it is fed, sends forth a full, clear, and unpolluted stream. In his most original work, "The Illustrations of the Huttonian Theory of the Earth," he developed the ideas of a profound geologist with the eloquence of a poet; and his style unites dignity, and even majesty, with simplicity. He has thrown upon objects, obscure and difficult to most persons, a light of genius, which has even given to them brilliancy as well as interest. He has developed in the system of the globe a sublime, intelligent order, depending upon the eternity and security of the laws of nature.

The laborious researches of the geometrician, and of the physical inquirer, did not prevent Playfair from occupying a portion of his time in subjects of literature and of taste; and some disquisitions in the *Edinburgh Review* show that he was equally sensible to the beauties as to the defects of works of imagination; and prove that his mind was as elegant and as refined in its passive sensibilities, as acute and strong in its active powers.

In his conversation he was clear and simple, displaying a wonderful talent for illustration, never aiming at brilliancy or

effect, but always searching for or communicating truth ; and the kind feelings, and perfect and uniform good nature with which he abandoned himself to others, for the sake of giving information, threw a light upon his conversation, which, like that varnish of Apelles, described by Pliny, exalted all that was beautiful, gave brightness to the colour, and effect to the shade.

He was no less amiable as a friend and kind as a relation, than distinguished as a philosopher. Whoever indeed inquires into a character highly marked by excellence and benevolence, will find that these qualities are most experienced and exerted in the circles of nearest connexions ; the tide of social feeling, when it extends far, must be powerful at its source, and deepest at its origin ; but, what his nearest affections were, can only be described by those who live to regret the loss of them, and to feel and know that whatever the public feeling of grief may be for departed genius and excellence, it can be as nothing compared to the deep and profound sentiment which will always remain in the hearts of those who have enjoyed his intimacy, and who will carry to their graves the indefinite recollection of a thousand amiable traits of character, and almost indescribable moral excellences.

It was about this time, judging from the following extracts, that he formed the idea of giving to the world, in a popular form, his thoughts and opinions on the subjects which had interested him most :—

Plan of a work to be composed during my travels. Views of the Chemical Philosophy of Nature and the Arts, in the manner of discussion or conversation, by H. D.

Characters.—A Poetical Philosopher, a Metaphysical Philosopher, a Chemical Philosopher.

Names, Greek.—Feeling, observing, thinking.

Portions even of this work were written at this time. He resumed it afterwards, especially during illness, when it became his amusement. His "Consolations in Travel; or, The Last Days of a Philosopher," which he did not live to complete, and his "Salmonia; or, Days of Fly-fishing," of which he had the satisfaction of preparing a second edition, were written in accordance with this plan; and the manner in which both have been received, shows that the conception, as well as the execution, was a happy one.

The following are a few miscellaneous extracts belonging also to this period:—

"There is a beautiful circumstance in the economy of the globe, which I believe has not been attended to—that water at a low temperature preserves heat, its power of losing it, either by radiation or communication, being very small. And, hence, all polar lands near deep seas are comparatively warm. But, when its temperature is raised, its power of giving vapour, which carries off the heat, is greatly increased: the warm water above 50°, which is the equalising temperature, is lighter than the cold water; it rises to the surface, where it becomes more warmed by the solar rays, and assumes the form of vapour, *i.e.*, the excess of heat is lost in causing the water to assume the gaseous state. Hence, under the line, the action of the solar rays upon the deep water never raises the temperature above 81°. This power of water to become steam, and of course its power to carry off heat, is wonderfully increased with increase of temperature, probably in a ratio not much lower than the square of the temperature. Hence, above 100°, it would be very difficult, by radiant heat penetrating the surface, to raise the temperature at all. The heat employed to produce vapour

is not lost, but it acts again in *producing heat* when the vapour is carried into colder regions, and at the same time waters the earth in rain or dew."

Objects of Experiments at Rome and Naples, 1819.

1. To ascertain if the water found in rock crystal be *pure water*.

2. To ascertain if anything can be done to preserve the frescoes of Raphael in the Vatican.

3. To determine if the spots in Carrara marble are iron oxide, and if they can be obliterated.

4. To determine if the *opinion* or the facts of Lanley be correct, that the cold in the cellars under Monte Testaccio is greater than elsewhere in Rome, and if the cause be radiation from the potsherds.

A people amongst whom abuses have gradually accumulated, may be compared to a lake where the mud carried down by the torrents gradually covers the bottom, and conceals all that it may contain of beautiful or precious, gems or ores. A revolution, like an earthquake, mixes all the materials together, and shows what is valuable and useful. The mud is washed away, and with it some of the weightier substances; but most of those are preserved, they sink to the bottom, and when the commotion has ceased, appear, and are valued, and used.

Rome, April 11, 1819.—Nothing suits this city less than the pomp, noise, and diseased action of a court. The feeling produced by the remains of that people which conquered the world, and which ultimately diffused the arts and the letters of Greece, from the mountains of Imaus and Caucasus, to the wilds of Caledonia, is one of melancholy and sublimity. There is no analogy between the nothingness of modern state, and the greatness of ancient glory.

A courtier in the ruins of Rome, is like a butterfly on the bone of a giant.

CHAPTER VII.

FROM HIS FIRST ELECTION TO THE PRESIDENCY OF
THE ROYAL SOCIETY, IN NOVEMBER, 1820, TO HIS LAST,
IN 1826.

ON the chair of the Royal Society becoming vacant by the death of Sir Joseph Banks, he was called to fill it by the unanimous voice of the Fellows, and for six consecutive years he was as unanimously re-elected.

He commenced his presidential duties with a high sense of their importance, and a sanguine expectation and desire of promoting the interests of the Royal Society, and of science. Whilst he was in office, the reputation of the society was certainly not diminished, but rather exalted; the desire to belong to it was increased; its Transactions were scarcely at any former time more original or interesting; and at no former period was there more harmony in the general body of the Fellows. And yet, I believe, his expectations were not answered, and he effected very much less than he wished. Government was lukewarm or indifferent in matters of science, and gave him no effectual support; when requiring the aids of science and of the Fellows of the Royal Society, applying to

him without hesitation; when their objects were attained, forgetting the services. It was his wish to have seen the Royal Society an efficient establishment for all the great practical purposes of science, similar to the college contemplated by Lord Bacon, and sketched in his *New Atlantis*; having subordinate to it the Royal Observatory at Greenwich for Astronomy; the British Museum for Natural History in its most extensive acceptation; and a laboratory founded for chemical investigation, amply provided with all the means requisite for original inquiry, and for extending the boundaries and the resources of this most important national science. I remember well his speaking to me more than once on the subject: he had even the idea of raising the funds necessary for forming a laboratory by a subscription amongst the Fellows themselves, without the aid of Government; and he probably would have attempted this, and some other plans for the advancement of science, had his health remained firm. Amongst objects which were accomplished at this period in which he took an interest, and to which he gave his support, three especially may be mentioned. The continuation of the Polar Exploring Expeditions, the establishment of the Zoological Gardens, and the Athenæum Club. As regarded satisfaction and pleasure to himself, these, I fear, were not without alloy, and particularly latterly, when from failing health, and an unusually sensitive state, the consequence of failing health, he was least able to bear annoyances. He was not an exception to the rule, that those who

in their career are eminently and rapidly successful, are subject to envy and detraction, and that in London, as of old in Rome, they must expect to suffer "*Medicorum et philosophorum in urbi malignitate.*"

To show the feeling with which he entered on his office, I shall give the speech which he made at the anniversary dinner on the day of his election, St. Andrew's Day, the 30th of November, taken from a rough draft which I have found in pencil; and a portion of his address to the Society at its first meeting, on the Thursday following the election of its officers; and, further, in proof of the manner in which his exertions were appreciated, I shall add the "resolution" presented to him, after the tendering of his resignation. The document, which is in my possession, is on parchment. Mr. Davis Gilbert, on the occasion of proposing the resolution, was the acting interim president appointed by the council.

Gentlemen—I return you my sincere thanks for the manner in which you have drunk my health. I can hardly find language sufficiently strong to express my sense of the honour you have this day done me, in electing me your President.

When I recollect the illustrious names which have been associated with this dignified situation, I cannot but feel the humility of my own pretensions. In one respect, however, I will not yield to any of my predecessors, in zeal, and an ardent wish to promote the objects of your Institution, and in devotion to the cause of science, which is identified with your existence as a body.

Gentlemen, when I look round the table, when I reflect upon the manner in which a number of the Fellows now present have distinguished themselves, and given pledges of future

labours, I cannot but feel sure that the society will preserve that prominent rank which it has so long held amongst the learned bodies of Europe, and that its glory will be transmitted by you, not impaired, but exalted, to posterity.

The last toast, one which is always given from this chair, one connected with literature and the arts, the culture of which is so intimately related to the progress of civilization, is the advancement of science, and success to all institutions and societies intended for promoting it.

I feel that this illustrious body stands sufficiently high to be above all jealousy. The field of nature is so extensive and unsubdued, as to call for all the labour and exertions that can be made for its cultivation; and, in the twilight of our scientific knowledge, there is no danger that there can be too many constellations to give us light.

The concluding part of his address at the first meeting of the society was as follows. The whole of it will be found in his published Discourses, and in the seventh volume of his Collected Works.

I trust in all our researches we shall be guided by that spirit of philosophy, awakened by our great masters, Bacon and Newton, that sober and cautious method of inductive reasoning, which is the germ of truth and of permanency in all the sciences. I trust that those amongst us who are so fortunate as to kindle the light of new discoveries will use them, not for the purpose of dazzling the organs of our intellectual vision, but rather to enlighten us, by showing objects to us in their true forms and colours; that our philosophers will attach no importance to hypotheses, except as leading to the research after facts, so as to be able to discard or adopt them at pleasure, treating them rather as parts of the scaffolding of the building of science than as belonging either to its

foundations, materials, or ornaments; that they will look, where it is possible, to practical applications in science, not, however, forgetting the dignity of their pursuit, the noblest end of which is to exalt the powers of the human mind, and to increase the sphere of intellectual enjoyment, by enlarging our views of nature, and of the power, wisdom, and goodness of the Author of nature.

Gentlemen, the Society has a right to expect from those amongst its Fellows gifted with adequate talents, who have not yet laboured for science, some proofs of their zeal in promoting its progress; and it will always consider the success of those who have already been contributors to our volumes as a pledge of future labours.

For myself, I can only say, that I shall be most happy to give, in any way, my assistance, either by advice or experiments, in promoting the progress of discovery; and though your good opinion has, as it were, honoured me with a rank similar to that of general, I shall always be happy to act as a private soldier in the ranks of science.

Let us labour together, and steadily endeavour to gain what are, perhaps, the noblest objects of ambition—acquisitions which may be useful to our fellow-creatures. Let it not be said, at a period when our empire was at its highest pitch of greatness, the sciences began to decline—let us rather hope that posterity will find, in the *Philosophical Transactions* of our days, proofs that we were not unworthy of the times in which we lived.

The expression of regret at his retirement, with acknowledgment of his services, was worded as follows, thus introduced:—

At a meeting of the Royal Society, held on Thursday, the 15th November, 1827, the President stated from the chair

that he was directed by the Council to submit the following resolution to the Society, which was unanimously agreed to :

“That the regret of the Fellows of the Royal Society be expressed, in the strongest terms, to their late excellent President, Sir Humphry Davy, Baronet, for the state of health which has unhappily compelled him to relinquish the chair, together with their thanks for the unremitting diligence with which he has at all times endeavoured to promote the interests of science and the welfare of the Royal Society, and for the learned and eloquent discourses with which, at each anniversary during his presidency, he concluded the business of the year.”

His scientific labours, after he became president, were chiefly directed to electro-magnetism and electro-chemistry. In the first a new era was just then opened by Ørsted's discovery of the magnetising power of the pile of Volta, the foundation of that the most wonderful of the sciences in its practical effects, as witnessed in the electro-telegraph acting almost independently of space and time. By the second, electro-chemistry, he had a sanguine hope of effecting, by means as simple as the safety lamp, a result, in an economical point of view, hardly inferior to that which the safety lamp afforded—I allude to the preservation of the copper sheathing of vessels, the wear of which from the corroding action of sea-water is so costly in the navy and the mercantile marine, and which failed only in its efficacy (paradoxical as this may appear) from being too efficacious—that is, from so completely protecting the metallic surface

from waste, that the sheathing became foul, owing to the adhesion of parasitical growths; and on the part of the crews of the vessels, from a want of will and energy to get rid of these growths by mechanical means. Though a failure as to its results, this discovery was considered by La Place as his greatest, viewed, of course, in relation to the mental process by which it was worked out. It is curious, too, to observe that the principle on which it is founded; the influence, the diverting influence, of a small portion of one metal on a large surface of another metal in an opposite electrical state, has come into use as a metaphor in popular writing. Thus, in a number of *The Times*, the writer, illustrating the effect of the perception of the ridiculous, remarks—“This small faculty, which grave senators despise, and delight to identify with levity and mockery, is like one small nail, which, by means of Sir Humphry Davy’s discovery, acts with marvellous power in diverting the galvanic current, and in saving the whole of a ship’s bottom from the most rapid destruction.”

His travels during this period, with one exception, were chiefly limited to short excursions to different parts of Great Britain and Ireland; the exception was a voyage to Norway, which he undertook chiefly for the purpose of testing the “protectors.” The journal which he kept of this voyage, and of his travels in Norway and Sweden, is given in the *Memoirs of his Life*.

Of the letters preserved pertaining to this time,

the following is a selection. They are inserted as helps to show his course of life, his travels, especially his Scandinavian, and the insidious beginning of that illness which obliged him to resign the chair of the Royal Society, and seek rest in retirement.

To his Brother.

Raith, September 10, 1820.

My dear Brother—I am very sorry you are indisposed, but I hope your cold will be transient, without unpleasant consequences. Your account of our friends at Penzance is what I had anticipated. Your return would be a cordial both to my mother and my aunts; pray remember me in the kindest manner both to them and my sisters.

Mr. Allan is here, and he, and Mr. Ferguson, and Professor Leslie, all desired to be kindly remembered to you, and congratulate you on your return in good health from so dangerous a climate as that of Ceylon. Murray, the oxymuriatic, is dead; Dr. Hope is absent; Mr. Henry Mackenzie is still in blooming old age, and asked very kindly for you; Sir James Hall is as usual—I am going to him next week; Sir Walter Scott, with whom I spent a few days at Melrose, is flourishing in all the glories of a poet and a *laird*, and has bought and improved a fine landed property on the banks of the Tweed.

As all opposition to my election is at an end, I am in no anxiety to return to London, and I shall take holidays while I may. Pray write to me, under cover to Mr. Rose, at Rokeby, near Greta Bridge, where I shall be about the 20th.

I am, my dear brother,

Very affectionately yours,

H. DAVY.

To the Same.

Grosvenor Street, October 19, 1826.

My dear John—I had intended to leave town for Cornwall to-morrow, but I have been caught by an inquiry of the greatest importance; and till I can conclude I cannot stir.

I have ascertained (repeating some vague experiments of *Ørsted's*¹) that the *voltaiic pile* is a powerful magnet, *i. e.*, that by the union of the + and — electricities, magnetism is produced in the same combinations as heat. I am deeply occupied with this, which promises to explain so much for the theory of the earth. Do not say anything on the subject. I hope in two or three days to be able to give you the whole details, of which you will immediately perceive the importance.

Faraday has discovered a combination of chlorine and charcoal.

Sir Everard Home has made out the use of the pigmentum nigrum.

I write from the table where I am *magnetising*. I rejoice your book² is so far advanced. If I can conclude my labours by the 24th, I will come down before the session of the Royal Society. If not, we shall meet about the 25th. You must come to town to assist in putting me in the chair.

I am, my dear John, very sincerely,

Your affectionate friend and brother,

H. DAVY.

The visit alluded to in this letter he was not able to make at the time proposed. He accomplished it,

¹ The account he received in a letter from Geneva was vague; the Danish philosopher's experiments were precise. A royal medal was afterwards awarded him for them.

² "An account of the Interior of Ceylon, and of its Inhabitants, with Travels in that Island."

however, in the following year; and it was his last to his native place. In a letter to his mother, of the 8th December, 1821, he says,—“I hope to be at Penzance on Sunday the 15th, or Monday the 16th December, when I trust I shall find you and my sisters quite well and happy.”

The next day, the 17th December, was his birthday, his forty-fourth. In twenty-three years, reckoning from his leaving home for Clifton, he had risen to what he then was. On this occasion he received the honour of a public dinner, given by the magistrates and gentlemen of the town and its neighbourhood. The entertainment was held on the 27th December; an account of it was published in the provincial papers.

The autumn preceding he had been in the Highlands, from whence was the following letter:—

To his Brother.

Garve, Inverness, August 11, 1821.

My dear John—I have heard from Lady Davy that you had been in town, and that your voyage was put off *sine die*. I hope now that it will not take place till the winter is over, and that we shall meet again in the autumn. I shall certainly be in town about the middle or before the end of October.

I have had a rough but agreeable journey and voyage amongst the wildest parts of the highlands, the west of Ross-shire. I have seen some beautiful lake scenery on Loch Maree, and caught some salmon, in spite of bad weather, in the river which runs from it into the sea, and which formerly was the best river for angling in Scotland; but they have now placed the cruives close to the sea, and left only a single pool for the honest angler.

I shall take the campaign against the grouse here to-morrow, in Sir George Mackenzie's moors.

The Highland lairds are all marching bag and bagpipe (not baggage) to Edinburgh, with as strong expressions of loyalty as if they had never been Jacobites, and Scotland is all in commotion. I dined with Sir Walter Scott the day before I left Edinburgh, who is in fact master of the royal revels. I was much amused to see the deep interest he took in tailors, plumassiers, and show dressmakers, who are preparing this grand display of Scotch costume.¹

Pray address me, Post Office, Blair Athol, and believe me to be,

Your very affectionate brother and friend,

H. DAVY.

The mention of Loch Maree in this letter, brings to my recollection what I heard many years after when I visited the neighbourhood of that wild and magnificent lake. First, how he had been nearly purchasing the fishery of Pol Ewe, then in the market, but failed, owing to some doubt about the title; next, the account I had of his reception in this remote part of the Highlands, how he was welcomed with acclamation by the people of the country on his repeating his visit; showing, as my informant (the old post-master at Gairloch) said, that he had won their hearts by his kindly and sportsman-like manner. There, too, I was reminded, learning that the grand mountains skirting the lake are still the haunt of the eagle, of the incident he had witnessed there—the

¹ On the occasion of the visit of George IV. to Edinburgh.

teaching the young birds to fly—an incident which he narrates in his *Salmonia*, and which inspired those verses (they will be found at the end of this chapter), which, on my reading them from the MS. at Malta, to a gentleman of high literary authority, the late Mr. Hookam Frere, produced the exclamation, “This indeed is poetry!”

The following letter, so gracious and graceful, I am tempted to insert, and with a translation, that those of my readers not familiar with the French language may have an example of the courtesy of a prince—the Crown Prince of Denmark—and of his expressed regard for men of science:—

Copenhagen, ce 4 Mars, 1823.

Monsieur—En me rappelant les procédés aimables et les attentions dont vous avez usé vis à vis de moi durant mon séjour en Angleterre le désir de conserver une place dans votre souvenir en est une conséquence, et croyant ne pouvoir mieux le mériter qu'en vous donnant des marques de mon souvenir je m'empresse, Monsieur, de vous faire passer ces lignes. Elles vous parviendront par l'entremise de notre savant Œrsted, qui se rend de Paris à Londres afin de recueillir les progrès qu'ont fait les sciences physiques dans la patrie de Davy et de Wollaston. Je me réjouis d'avance des avantages pour les sciences qui résulteront des communications directes qui vont exister entre vous, monsieur, et mon savant compatriote. Il aura à se louer de vos bontés et de l'accueil que lui feront les savants et les amis de la science en Angleterre; par votre intercession l'Institut de Londres voudra permettre qu'il participe aux expériences qu'on pourra faire avec son grand appareil voltaïque. Guidé par vous, il ne manquera pas dans le but de son voyage.

Veillez, je vous prie, me rappeler au souvenir du Dr. Wol-

laston. J'ai appris avec beaucoup de peine que le Docteur Marcet est mort ; sa santé lui promettait, ce me semble, une vie plus longue.

L'ami Monticelli m'a écrit au mois de Novembre passé de vous avoir envoyé une caisse de minéraux choisis par Compton¹ au nombre de 600, mais qu'il ne voulait point toucher la somme convenue que le Chevalier Hamilton lui avait offerte sans que vous la lui assigniez et sans savoir de vous l'arrivée de la collection.

Si je ne me trompe, vous avez encore gardé le manuscrit Latin de Monticelli qu'il désirait vous faire lire ; veuillez le remettre sous mon adresse au Chargé d'Affaires Danois, M. Ciangewitz.

Je vous envoie avec la présente une petite boîte contenant des échantillons taillés des opales colorées de Fieroé, lesquels trouveront leur place dans la collection du Musée Britannique, en cas qu'ils ne s'y trouveraient pas.

Malgré l'hiver assez rude que nous avons eu ici, la santé de mon épouse n'a pas été altérée et je me porte très-bien.

Je vous prie, monsieur, de faire mes compliments à Lady Davy, et de me croire à jamais votre,

Touté affectionné,

CHRISTIAN FREDERIC.

Lorsque vous me répondrez, je vous prie de vous servir de la langue Anglaise, que je puis assez bien comprendre sans pouvoir l'écrire.

[TRANSLATION.]

Copenhagen, March 4, 1823.

Sir—In recalling to my mind the kind and pleasing attentions which I received from you during my stay in England, the desire to preserve a place in your memory (and which I know not any better way to deserve than by showing how much you remain in mine), makes me hasten to address to you these lines. They will be placed in your hands by our savant, Ørsted, who proceeds from Paris to London to acquaint himself

¹ Lord Compton, afterwards Marquess of Northampton, for many years President of the Royal Society.

with the progress made in physical science in the country of Wollaston and Davy. I rejoice in anticipating the advantages to science from these direct communications about to arise between you, sir, and my learned fellow-countryman. He will have you to thank for the civilities of reception that may await him from the savants and the friends of science in England, through your introduction. The London Institution will permit him to share in the experiments which are made by means of its great voltaic battery. Under your guidance, he cannot fail perfectly to attain the object of his journey.

May I beg you to recall me to the remembrance of Dr. Wollaston. I have learned with much regret, that Dr. Marcet is dead. His health (when we last met) seemed to promise a longer life.

My friend Monticelli writes to me in the month of November last, that he has sent you a case of minerals chosen by Compton, to the number of 600, but that he did not wish to receive the sum agreed on as their price and offered to him by Sir W. Hamilton, until he knew whether you had commissioned the payment, and until he had learned from yourself of the safe arrival of the collection.

If you should still have in your possession the Latin MS. which Monticelli wished you to read, will you return it under cover to me, addressed to the Danish Chargé d'Affaires, M. Ciangewitz.

I send you along with this a little box containing specimens cut from the coloured opals of Fieroe, which may find a place in the collection of the British Museum, if not there already.

In spite of the severe winter we have experienced, the health of my wife is nowise affected, and I am very well.

May I request you, sir, to present my compliments to Lady Davy, and to believe that I am always your affectionate

CHRISTIAN FREDERIC.

When you reply to my letter, pray use the English language, which I understand perfectly how to read, though not to write.

To his Brother.

October 30, 1823.

My dear John—I received your letter from Edinburgh, and I am very glad you arrived safe, and had a pleasant passage. I envy you the power of bearing a sea voyage. I suffer not only at the time, but some days after, which I believe is owing to the irritable and diseased state of my liver, or some of the organs connected with it.

I have not been well since my return to town. I have my usual autumnal affection of the stomach and bowels. I have had pains, apparently not inflammatory, in my hands and feet: can this be gout, or is it merely symptomatic of the state of the stomach?

To add to my annoyances, I find my house, as usual, after the arrangements made by the mistress of it, without female servants; but in this world we have to suffer and bear, and from Socrates down to humble mortals, domestic discomfort seems a sort of philosophical fate.

Dr. Wollaston is nearly well of his wound, which has given him a good deal of pain. The explosion was from a *common* powder-horn, but he cannot explain at all how.

I have just received your papers, and shall dispose of them as you desire. Sir Everard [Home] has published his Lectures—a magnificent book as to engravings, chiefly in consequence of the liberality of the Royal Society: and it contains certainly a great mass of valuable matter, with much loose speculation and *microscopic* physiology; but this between ourselves.

I have written to Mr. Ferguson lately; I have no doubt he will be glad to see you at Raith, and it is a delightful house.

I am, my dear John,

Very affectionately yours,

H. DAVY.

To the Same.

Firle Place, January 30, 1824.

My dear John—I am very glad you have taken the resolutions you communicated to me in your last letter. I am sure they are the wisest you could take, and ultimately the most likely to promote your happiness. Upon points of affection it is only for the parties themselves to form just opinions of what is really necessary to ensure the felicity of the marriage state. Riches appear to me not at all necessary, but competence I think is; and after this, more depends upon the *temper* of the individual, than upon personal, or even intellectual circumstances. The finest spirits, the most exquisite wines, the nectars and ambrosias of modern tables, will be all spoilt by a few drops of bitter extract, and a bad temper has the same effect on life, which is made up not of great sacrifices or duties, but of little things, in which smiles and kindness, and small obligations given habitually, are what win and preserve the heart, and secure comfort.

I shall be in London the whole of March, and the first week in April, and most happy to see you.

I have lately made a discovery, of which you will for many reasons be glad. I have found a simple method of preserving the copper sheeting of ships, which now rapidly corrodes. It is by rendering it negatively electrical. The results are of the most beautiful and unequivocal kind—a mass of tin renders a surface of copper two or three hundred times its own size sufficiently electrical to have no action on sea-water.

I was led to the discovery by principle, as you will easily imagine; and the saving to government and the country by it will be immense. I am going to apply it immediately to the navy. I might have made an immense fortune by a patent for this discovery; but I have given it to my country, for in everything connected with interest, I am resolved to live and die at least “sans tache.”

Dr. Russell dined with me on Saturday. He seems a very modest and intelligent man. He brought me a letter from Sir W. Scott, and is the son of the professor. Lady Davy is in good health. I had a letter from my mother a few days ago. They were all well.

I am, my dear John, very sincerely,
Your affectionate friend and brother,
H. DAVY.

Pray when you see Mr. Allan, say that he will find his letter to me answered in the advertisement of the London Committee. Our experiments proved the Aberdeenshire granite to be excellent; but I could not take notice of any private applications.

The three following letters to Lady Davy give, more briefly than the journal already referred to, an account of his travels and impressions in his northern continental tour. Lord Clifton, afterwards Lord Darnley, the father of the present Earl, was of the party, as was also Dr. Tiaks, an astronomical observer, commissioned to determine the exact longitude of Heligoland, to connect the Danish and British survey. The voyage going and returning was made in H. M. steam-ship Comet, which was placed at my brother's disposal by the Board of Admiralty, to enable him to test by trial the efficacy of the galvanic protectors. He left England, embarking at Greenwich, on the 30th June, and returned, arriving in London on the 20th August.

To Lady Dary.

Gottenburgh, July 20, 1824.

My dear Jane—I wrote to you from Mandals immediately after our arrival, but as the steam-boat was detained, and probably may be detained by stormy weather, there is a chance that this letter will reach you as soon as the other. I have hitherto had no chance of getting a letter forwarded by the Norwegian post in any reasonable time, but I now think this cannot fail, as Sir Benjamin Bloomfield has promised to send it with his despatches.

I will not go over the miseries of stormy weather in a steam-boat, which produced an indisposition from which I now hope I shall soon recover, as it has ended in a violent bilious attack, which has confined me to my bed for one day, and which still keeps me on the sofa.

Had I been quite well I should have much enjoyed the scenery and the forms of life I have seen ; and, as it is, they have fed my mind with materials for thought, and shown me that there is still much that is new both in nature and society.

The scenery about Mandals, which I have described in my former letter, is the most beautiful and varied I have seen ; but all the southern coast of Norway abounds in peculiar and extraordinarily fine and even sublime features. Thousands of islands, some of bare granite, some covered with birch, and alder, and roses, and woodbine, and some with the more gloomy and grand covering of pine wood, rise in ocean, the fiords or lochs of which resembled those of our Scotch fresh water lakes, and they would not be known to be salt, except from the immense quantities of beautiful medusas, or blubber fish, of a hundred brilliant colours, which move about in the green depths like animated flowers, some a foot in diameter, and of all sizes, down to an inch.

The scenery in Sweden is of a wilder, and I think inferior, kind : there is too much pine wood and granite, and the moun-

tains are less elevated ; yet there are, in the road from the frontiers to Gottenburgh, some scenes of exquisite beauty.

I have seen two of the great falls of Norway—that of the Torridale, which is almost equal to that of Shafhausen, except that it is disfigured by sawmills—and that of the Glommen, the largest body of water in Scandinavia. It is a grand cataract, but wants wood. Trolhotta, in Sweden, is superior to them both, and is equal to any I have seen. The Gotha, I think, sends down more water than the Rhine ; and the number of falls, and the diversity of their character, make up for the want of perpendicularity. It is all green water and foam, with all possible variety of wood-clothed water for nearly half a mile.

I have so filled my paper, that I have little room for describing adventures and people. The Norwegians entertained us most hospitably, but in a way peculiarly their own :—Dinners of the most singular kind, where the ladies of the house waited at table ; toasts and songs given whilst the plates were going round, and a *cuisine* remarkable for abundance, not for elegance. Nothing could exceed the misery of travelling in Sweden, or the wretchedness and dirt of the inns. As far as I have seen the people, I dislike them exceedingly. Lord Clifton has been an invalid as well as myself, and is gone home in the steam-boat. I shall stay here till I am well, and then go home by Copenhagen, and perhaps take the steam-boat at Altona, if the weather be fine. I hope to be at Altona about the 2nd of August, and in London by the 7th or 8th. Write to me at either of these places, as you find the time suit. God bless you ! I hope you are well and happy.

I am, your most affectionate friend,

H. DAVY.

To the Same.

Copenhagen, July 28, 1824.

I wrote to you, my dear Jane, from Gottenburgh, under Sir Benjamin Bloomfield's cover, and requested Mr. Farquhar to send it to your address. Not having heard from England since my departure, I shall address this to you at Spa, concluding that if you have left it, you will have established some safe mode of communication of your letters.

My illness continued for three days at Gottenburgh, and prevented me so long from enjoying or seeing the Swedish society, though I was every day invited. I have, since my recovery, taken my water gruel at two English merchants' houses, who live in the Swedish fashion; and as the envoy was of the party, these dinners ought to give an idea of their fêtes. There was hospitality and plenty of good wine, but I cannot say much for the *cuisine*. Sir B. Bloomfield has been very attentive to me, and came and sat with me every day by my sofa. He is an agreeable, good humoured, active, intelligent, and business-like courtier, and will bear this stamp to his grave. He seems fitted for a court, and talks of the King of Sweden as an ambassador ought to do. I found Lord Castlereagh with him, who has spent a good deal of his time with me. He is exceedingly improved, and I think very highly both of his talents and his kindness of heart and manner.

I was anxious to leave Gottenburgh, for, to tell the honest truth, I dislike Sweden exceedingly; but the governor urged me to stay a day to see the Crown Prince. He arrived at night; I was presented to him in the morning, and spent some hours of the day with him, and dined with him and the Princess. Prince Joseph Oscar is really a very fine young man, well informed, enlightened with some knowledge of science, a pupil of Berzelius, and, for twenty-four, with more liberal views and just ideas of human nature than I had anti-

cipated, a friend to general education, and likely to be a King of a new school. The Princess, the granddaughter of the Empress Josephine, has the most beautiful complexion I ever saw, and is a very striking person, only seventeen, finely, but, I think, rather feebly formed, graceful, agreeable, and playful, and unaffected in manner. She talked to me of her grandmother, and I could find hardly any other topic, except Trolhotta, which she was going to see.

I was three days on my land journey from Gottenburgh here: the first forty miles the scenery was agreeable, after it was barrenness. The Swedish inns are the worst in Europe, the roads amongst the best. The scenery hilly, with cairns of granite, a good deal of small wood, birch, beach, oak, and alder, and now and then dark pine forests. Sweden is more like the edge of the highlands than any country I have seen.

I came here from Helsingburgh by water in four hours. Copenhagen is a fine city, much finer than Vienna, but capitals are so much like each other, that descriptions of them are like those of eggs—they differ in size and spots only. The people are good looking. Prince Christian is expected here to-night. God bless you!

I am, your most affectionate friend,

H. DAVY.

I am, for the first time since I left England, in a *tolerable inn*. Women could hardly travel in the north, at least women with any refinement.

Copenhagen, July 31.

An accident has happened to the Lubeck steam-boat, so that I am detained till Tuesday. I have seen the collections and library here, which are very good. I spent a very pleasant day yesterday with the Prince and Princess, and dined with them. He was very kind, walked me round his own grounds, and took me to the King's park. She is grown very hand-

some, and her complexion is become clear, with a fine changing colour. They appear to live very happily, and are much beloved. I dine with them again to-morrow.

To the Same.

London, August 20, 1824.

My dear Jane—I have had only one letter from you since my voyage, which was addressed Edinburgh, and which I found here on my return two days ago. I am very glad you enjoyed your journey, and that you are well and amused. I have written to you four times; the last letter was from Copenhagen: I hope you have received all my communications. After I wrote to you I dined with a court party at Prince Christian's, and took my leave of their Royal Highnesses, who continued their courtesies and kindness till my departure.

The day before I left Copenhagen I saw Mr. Foster, who had been absent, and he took me to dine with the Dutch minister, where I met the corps diplomatique, containing, amongst other persons, Baron de Cazes. The details of dinners are much the same, therefore I will not occupy paper with them.

I went from Copenhagen to Kiel, in Holstein, in a steam packet. We were twenty-six hours on the sea; but our voyage was along the coast, and between fertile and green islands, so that we had almost always smooth water. The coasts of the Danish islands are low, but green, and well wooded, and put me in mind of the banks of the Thames, on the Essex side, but of course without any of the commercial or artificial accompaniments of our wonderful metropolis.

From Kiel, a pretty town, with more hill and wood round it than I had seen before in Denmark, I went over wretched roads in a heavy cart or waggon to Hamburgh. Heath and meadow, and sandy steppes and dark pine woods, accompanied

my view all the way; and two days were wearied out in this unprofitable and unpicturesque journey. Hamburgh burst upon me from these dreary solitudes, as a fine, busy, and active commercial town, of the scale of Bristol, but dull, from being only the abode of northern people, "qui fumant et non saltant," to use the Hungarian post-master's bad Latin. At Altona I was received by Professor Schumacher, the King of Denmark's astronomer, who was profuse of kindness and hospitality, and who gave me fine compliments and better dinners. Here the Comet steam-boat arrived the day after me. And finding that the celebrated Geometer Gauss, the rival of Laplace in pure mathematics, was taking the last triangle of the kingdom of Hanover at Bremen, I sent the steam-boat round to Bremen, and in Schumacher's carriage crossed the kingdom of Hanover. I spent two very pleasant days at Bremen, and dined with Olbers, the celebrated discoverer of two of the new planets, and had most excellent cheer. I was delighted with Olbers and Gauss, as with Schumacher: their amiable characters and high moral qualities made me proud of the effects of intellectual pursuits in a country where they confer less distinction than in France or England. These three men were gentlemen in all their feelings, and full of liberality.

From Bremen here, three days, two of *storm*; and such a gale as never blew in the north sea: the steam-boat, though covered with surge, gallantly made head against wind and wave. And, after sickness, which leaves me weak, here I *am* safe. Had a paddle given way, nothing could have saved us.

You were probably on the *Elbe* at the same time that I was, and you might have *floated* down a letter to me. I am at the end of my paper, or I would give you two or three incidents: one which shows "the greatness and nothing of a name," I will give. It was a bright and beautiful moonlight, I went to see "Klopstock's grave" under a linden tree, in a beautiful village near Altona. Close to it was "a Vauxhall;" I asked

two or three of junketting parties, "where Klopstock lay." It was only from the fourth person I learnt where the greatest of the poets of Germany sleeps!

Address me still here. God bless you!

Your most affectionate,

H. DAVY.

To his Mother.

Norman Court, near Stockbridge, January 2, 1824.

My dear Mother—A merry Christmas and a happy new year to you and my sisters, and all our friends at Penzance.

I am here on a shooting party, and I am going to make two or three other visits in Hampshire, but I shall be in town again by the 11th.

I have changed my house in London. I am now at 26, Park Street, Grosvenor Square. I have got a new house, more in sunshine, and in a better situation.

I never lose sight of the promise given me at the Admiralty about Mr. Millett,¹ and I can only repeat what I said in my last letter.

Do not mind any lies you may see in the newspapers, copied from a Portsmouth paper, about the failure of one of my experiments. *All* the experiments are *successful*, more even than I could have hoped for.

I have had so much to do, that I have not been able to be absent from London more than a week or ten days at a time, or I would have paid you a visit. I intend, however, certainly to do this next year, when I hope John and I may come down together.

With kindest love to my sisters, I am, my dear mother,

Your very affectionate son,

H. DAVY.

¹ A lieutenant in the navy, married to his youngest sister.

To T. A. Knight, Esq.

Trentham, Newcastle-under-Lyne, September 13 [1825?].

My dear Sir— I have been in Ireland, but I was not so fortunate as to meet Mr. Andrew Knight.¹ I believe I was in the north, when he was in the south. I hope he was pleased with the excursion. Notwithstanding the state of civilization, and the outrages of party in that country, I always visit it with pleasure.

You remember how often we have discussed the subject of the *parr*. I caught some in Ireland nearly ten inches long, but with the blue marks decided, and one a female. I think it merely a variety of the common trout, of which the colour and the form are so much affected by the nature of the water in which it feeds, and which transmits its peculiarities to its offspring. I wish Mr. Andrew would be so good as to try the experiment of feeding two or three parrs in a stew: I think they would increase in size, and determine the question of their nature.²

* * * *

I am, my dear sir,

Always your sincerely obliged friend,

H. DAVY.

¹ The son of his distinguished friend, who, sad to say, when in his prime of manhood, full of promise, amiable and talented, beloved and respected, lost his life by the accidental discharge of a fowling-piece. A subsequent letter, which will be given in the next chapter, expresses my brother's feelings on the occasion: attached to the father, he was hardly less so to the son, whom he had known almost from a boy.

² The question has now been determined, viz., that the *parr* is the young salmon or sea trout, and not a variety of the common trout. Its size seems to vary in different rivers, according to the amount of food; where there is abundance, growing rapidly; where food is scanty, attaining but a small size, before acquiring its silvery scales, which hide its transverse markings preparatory to migrating seaward.

To the Same.

Lowther Castle, Penrith, September 8.

My dear Sir—I wanted not the early fall of the leaf, and the rain, and the flooded rivers, to remind me of the time when I offered to pay you a visit. In this northern part of England the autumn is rather premature this year, and though the long summer drought is a bad omen, yet I hope before the middle of September the first rains may have spent themselves, as is the case in the south of Europe, to the climate of which our own this year nearly assimilates.

I have made a tour in Ireland and Scotland, and not being able to fish, I have studied a little the state of Ireland and of the distressed part of Scotland. I am convinced that a new system must be adopted with respect to religion in one country, and trade in the other, if it is not the intention of government to incur the evils of civil war.

The potatoes failed in part of Ireland. Was I right in recommending to some farmers, when the plant was puny, to cut off the blossoms to prevent the formation of seed?¹

To the Same.

Norman Court, January 2 [1826 ?].

My dear Sir—I wrote about a week ago to Mr. A. Knight, offering a few hints upon the preservation of eggs in relation to incubation. I was very busy at the moment, or I should have entered more fully into the plan of some experiments on the subject, which I hope he may be induced to make. It will be a great point if the principle of life can be made to *sleep* in the ova of birds and fishes as it is in the seeds of plants.

¹ The concluding part wanting—torn off.

I wish Mr. A. would try if eggs that have been kept three or four months in lime-water will have retained the vital principle. I have more hope in *electrical* than in chemical interferences—such as covering eggs with resin or varnish, or exclusion of air by machinery. Lime-water seems to prevent the action of air on the egg by *its electrical* effects.

I have had some conversation with Mr. Peel on the subject of a society for the introduction of new races of animals.¹ He has taken it up earnestly, and I am sure if we can set it a-going it will be very popular.

At the meeting of Parliament I hope something may be done.

With affectionate respects to Mrs. and Miss Knight, and sincere wishes for many happy years to all your family, I am,
my dear sir,

Always your obliged friend and servant,

H. DAVY.

To his eldest Sister.

London, July 2, 1826.

My dear Sister—I have been much grieved and somewhat alarmed to hear of my mother's illness. Pray write me by return of post, and say how she is, and give me a line every second day till she is convalescent. I hope, however, most ardently, that she is no longer suffering.

Lady Davy is quite well, and was never better; but I have been much indisposed, and can now write with difficulty from rheumatism in my right hand and arm. I think I shall not be well till the weather changes.

Sir Frederick Adam² is in England. He and Lady Adam

¹ Resulting in the formation of the Zoological Society.

² Then Lord High Commissioner in the Ionian Islands, where I was at the time, on the medical staff of the army.

dine with us next week. I have heard from John since he left him; he was quite well.

I hope John will be promoted, and return in October for two or three months, and I trust we shall see you all well together in November. If it please God, I will certainly be at Penzance the last week in October or the first in November.

With affectionate love and kind duty to my mother, I am,
my dear sister,

Your affectionate brother,

H. DAVY.

The hope expressed in this letter as to our mother's recovery, and a family meeting at Penzance, was never realised. Her illness proved fatal; and his illness followed, ushering in that paralytic attack from which he never completely recovered.

It was about this time that he and Mr. Wordsworth last met; and then the poet was impressed by his altered appearance and declining bodily strength.

Mr. Wordsworth, writing to a friend in Malta, the late Sir John Stoddart, specially notices this; his letter is of the 23rd July, 1831. I am tempted to give an extract with which I have been favoured by the gentleman to whom it was addressed, believing it to be interesting even in a reflex sense, as regards the tone of mind of the writer. The letter is from the poet's home, Rydal Mount, Ambleside:—

I became acquainted with Sir Humphry Davy when he was a lecturer at the Royal Institution; and have since seen him

frequently at his own house in London, occasionally at mine in the country and at Lord Lonsdale's, at Lowther, where I have been under the same roof with him several days at a time. Of his scientific attainments I am altogether an incompetent judge; nor did he talk upon those subjects except with those who had made them their study. His conversation was very entertaining, for he had seen much, and he was naturally a very eloquent person. The most interesting day I ever passed with him was in this country. We left Patterdale in the morning, he, Sir Walter Scott, and myself, and ascended to the top of Helvellyn together. Here Sir H. left us, and we all dined together at my little cottage in Grasmere,¹ which you must remember so well. When I last saw him, which was for several days at Lowther (I forget the year), though he was apparently as lively as ever in conversation, his constitution was clearly giving way; he shrank from his ordinary exercises of fishing and on the moors. I was much concerned to notice this, and feared some unlucky result. There were points of sympathy between us, but fewer than you might perhaps expect. His scientific pursuits had hurried his mind into a course where I could not follow him; and had diverted it in proportion from objects with which I was best acquainted.

The following extracts belong to this period:—

It is now eleven years since I have written anything in this book [a common note-book]. I take it up again, February 17,

¹ The little cottage in Grasmere was that at Townend, which the poet first occupied after his marriage, and in which he continued to reside till 1808. The time of this visit, of which he had such pleasant recollections, and which are still the recollections of his venerable and revered widow, was about 1806. The dinner, she has told me, was in the kitchen, in accordance, I may remark, with "the plain living" of the "high thinking" and gifted family. "Never," she said, "were we happier."

1821. I have gained much since that period, and I have lost something ; yet I am thankful to Infinite Wisdom for blessings and benefits, and bow with reverence beneath His chastisements, which have been always in mercy. May every year make me better, more useful, less selfish, and more devoted to the cause of humanity and science.

When I reflect upon the world, I cannot help sometimes entertaining the idea as if man were but the sport of some loftier intelligence, as if he were produced rather to show the power and benevolence than the perfect wisdom of the Divine mind, a sort of creative sport of Divine energy. For in all the other productions belonging to the globe there are fixed and simple laws which always produce *their results* uniformly, and according to an invariable order ; but reason, which is considered the highest gift of man, and his passions, lead to results the most extraordinary and unexpected.

Man is made without clothing, and no sooner than he has discovered the means of defending himself from the external elements, than he instantly creates useless forms of finery, and tortures organs into the most uncouth shapes, to gratify certain capricious ideas of fashion or beauty.

The first display of reason in New South Wales is that the savage extracts one of his fore teeth. In another country the whole skin is cut and pickled. In China the women squeeze their feet into shoes, and torture themselves more than if they went bare footed ; and in England men compress themselves in stays : painting the skin with noxious substances is another effect of reason.

Beasts fight animated by the passion of love, and the strongest perpetuate the species. Men fight and destroy each other without being animated by any passions at all, but because persons whom they support by their labour quarrel

about some slip of land, or some river, or some desert, which is of no importance whatever to the combatants.

Reason induces men to build houses for shelter; but their great expenses and labour are in erecting monuments which are of no use at all, in order that they may display vain glory, and be able (as by triumphal arches, columns, &c.) to insult other nations.

How much might be written on this subject.

The lines which follow are those referred to a few pages back, when mentioning Loch Maree:—

THE EAGLES.

The mighty birds still upward rose
 In slow but constant and most steady flight,
 The young ones following; and they would pause,
 As if to teach them how to bear the light,
 And keep the solar glory full in sight.
 So went they on till, from excess of pain,
 I could no longer bear the scorching rays;
 And when I looked again they were not seen,
 Lost in the brightness of the solar blaze.
 Their memory left a type and a desire:
 So should I wish towards the light to rise,
 Instructing younger spirits to aspire
 Where I could never reach amidst the skies,
 And joy below to see them lifted higher,
 Seeking the light of purest glory's prize:
 So would I look on splendour's brightest day
 With an undazzled eye, and steadily
 Soar upward full in the immortal ray,

Through the blue depths of the unbounded sky,
Portraying wisdom's matchless purity ;
Before me still a lingering ray appears,
But broken and prismatic, seen through tears,
The light of joy and immortality.

For the next lines, descriptive of a charming spot, interesting from associations as well as for its natural beauties, I am indebted to the respected proprietor of Ilam Hall, Jesse Watts Russell, Esq. This gentleman, in a note with which he has favoured me, accompanying the copy of verses, designates their author as his "late valued friend," and mentions that they were written in the first leaves of an Album that Sir Humphry had suggested: he speaks too of his "vivid recollection of the many happy days Sir H. had passed under his roof."

I must add that, for the insertion of them, I am fully sensible I expose myself to the charge of indiscretion, as being open to objection owing to the want of that polish and finish which verses require to fit them for publication. My only excuse is that their omission would be, as it were, the leaving out a trait of his social habits and character.

ILAM.

Ilam Hall, September 11, 1825.

If Inspiration ever dwells
In Nature's scenes, amidst the cells

Of mossy rocks, by crystal fountains,
Beneath the shade of wooded mountains,
Thy varied scenes may well supply,
Ilam, some touch of minstrelsy.
For there is sure poetic ground ;
Hills rise in majesty around,
The meadows are of emerald green,
The groves that close the solemn scene
In wildest form and sylvan guise
Steep as the rocky cliffs arise,
So deep their shade, they well might seem
Some wild, unhaunted solitude,
Fit for the poet's midday dream,
Where Nature, still untamed and rude,
And by no human fancy drest,
Retains her pure and virgin vest.
Beneath the wood, a crystal wave
Gushes from forth a moss-grown cave,
Pure, fresh, and living, from the rock,
Rent by some earthquake's awful shock,
In the elder time, asunder,
And falling thence in foam and thunder
To meet a kindred stream, whose name
Is blended with the classic fame
Of him, the Fisherman, who caught
The happy art of wakening thought,
Pious, vigorous, and chaste,
From simplest subjects, and with taste,
Quaint and antique, but yet refined,
Drew portraits of the Christian mind ;
Such as adorned the elder time
In worthies of our church sublime.
Haunting the lovely scenes of Dove,
Pure recollections may we prove,
And where the awful cliffs arise,

In sober mood philosophize.
Five thousand years have passed away,
And her bright waters on have rolled,
Since the exterminating day,
When rose the ocean, dark and cold,
And generations swept aside,
And all the power and all the pride
Of human things and mortal birth,
The might and beauty of the earth,
And the loose stones and ruin stand—
Records untouched by mortal hand—
Of what no mortal tongue had told
Revealed to the saints of old.

Amidst these scenes where Nature wild
May suit the Muses' purest child,
Art has not failed. In gothic dress,
And peering o'er the wilderness,
A stately modern pile appears,
And its embattled turrets rears ;
Not dark, and frowning, and severe,
Clothed in a rugged front austere,
But light in free and easy grace,
Fit for the genius of the place,
Hospitality refined,
Pure in hand, and heart, and mind ;
Walls scarcely tenanted,¹ yet decked
By the winged architect,
Whose home is of our flowery spring,
Who rests her light and vagrant wing
Only where the air is free and pure,
And on a work that may endure,

¹ " Sir H. Davy was one of my first guests in the new house."—A note by Mr. Watts Russell.

The prophet of the sunny morn
Of generations yet unborn.

Where yon tower is hid in bowers,
And virgin hands shall strew fresh flowers,
A wondrous work of art will stand,
Framed by a powerful master's hand ;
One worthy of that noble age
When Greece awoke and was the stage
Of highest acts, and heroes shone
Allied to gods, breathing in stone—
A wondrous work, a simple story
Of goodness better e'en than glory,
And reared by what can never die—
The purest filial piety.¹

Some future poet here may sing
Of those who now this roof beneath
Have stayed of time the fleeting wing,
Still to prolong the vernal breath
Which summer steals from spring,
To carry through the whole of life,
Free from the storms of care and strife,
The rose's odour and its balm,
And in the dewy evening's calm
In hope and heartfelt joy to prove
How blessed a family of love.

H. D.

¹ A monument of white marble by Chantry—one of his most admired works—in the little church at Ilam, erected by Mrs. Watts Russell in memory of her father, Mr. Watts. Adjoining, in the village, is another monument of affection, one from Mr. Watts Russell in memory of this lady, his wife, in form after the old English model of Queen Elinor's Cross, with this peculiarity,—a fountain of pure water at its base, not running to waste (happily typical of her revered character), first suppling a cistern for the use of the villagers and next in its overflowing troughs for the use of cattle.

CHAPTER VIII.

HIS LAST ILLNESS AND HIS LAST DAYS.

THIS last portion of his life was short, barely extending over two years, reckoning from the time, not of incipient ailment and a somewhat precarious state of health of longer duration, but from indisposition so severe as to render him unequal to the duties of President of the Royal Society, and to engaging in original scientific research, in which he so much delighted. It is sadly contrasted with any preceding period, having been one of uninterrupted bodily suffering, of struggle and endurance, of fluctuating feeling, of hope and despair—hope of recovery gradually waning with increase of bodily debility. It was ushered in by a severe attack of a paralytic kind, shortly after his last election, viz., in the beginning of January, 1827. Previously, his health for three or four years had begun to fail him; his constitution, hitherto so resisting and vigorous, seemed to be giving way; he was specially subject to attacks, bilious and rheumatic as he considered them, towards the fall of the year, of which mention is made in some of the preceding letters. His disabling, severe illness, began suddenly, when on a

visit in Sussex, at Firle Place, the seat of Viscount Gage. I was in England at the time, and as soon as possible joined him in town, and I had the satisfaction of accompanying him into Italy, through France and Piedmont, as far as Ravenna, the journey to which we accomplished between the 22nd January and the 20th February. An account of this journey is to be found in the *Memoirs of his Life*. It was undertaken by the advice of his medical advisers, his old and attached friend, the late Dr. Babington, and Dr. (now Sir Henry) Holland. At Ravenna, where I had to leave him, having to return to the Ionian Islands, my then station on the medical staff of the army, he was so fortunate as to find in the vice-legate, Monsignor Spada Medici, a friend—"a friend in need, a friend indeed"—at whose invitation, when there was a difficulty in procuring lodgings, he accepted the use of apartments in the apostolical palace. He remained on the continent till the October following, when he returned to England; on the 6th of that month he re-landed at Dover. Part of the winter he passed in London, part of it with his old friend, Mr. Poole, at Nether Stowey, in Somersetshire. Again, by the advice of his physicians, he left home for the continent, setting out in the last week of March—March 29, 1828. His companion this time was his godson, Mr. Tobin, the eldest son of his early friend, Mr. James Tobin, who had just then completed his medical education at Heidelberg. Going by way of France and Belgium, he crossed from the Rhine to the Danube; and from

that river, high up at Donauworth, proceeded slowly southward towards Italy, where he intended to winter. The advanced spring, and the whole of the summer and the early autumn, he passed amongst his favourite haunts in Illyria and Styria, changing from place to place, guided chiefly by temperature; as the heat of the season increased, ascending to cool Alpine regions; as it declined, descending to the lower and warmer levels, amusing himself as well as he could at the same time—that is, as far as his strength permitted—with shooting and fishing, and the pursuit of natural history. Nor was he without intellectual occupation: infirm of limbs, his mind was ever active; and at times, as he expresses it in one of his letters, he “was not without heroic thoughts.” It was in these his wanderings in quest of health, that he continued and finished most of the dialogues which were published after his decease.

Laybach, which had peculiar attractions for him, and might be considered as his headquarters in this region, he left on the 31st October. These attractions were, its situation near a fine river, its picturesque surrounding country, its pleasant climate, and, not the least, the having found at the inn where he stopped, a kind little nurse, the daughter of the innkeeper, of whom mention will be found made in some of the following letters, showing, I may remark, how sensible he was of attention, and how grateful for it when cheerily offered. After entering Italy, he halted on his way to Rome only at Bologna, and there but a day. He arrived at Rome on the 18th

November. There he occupied himself in his usual manner, chiefly, however, in literary labour. Writing from thence on the 17th January, he says: "I have finished three of my Dialogues, and I hope I shall live to finish the other two." Adding, "I believe the works on which I am now engaged may be useful, and may give useful pleasure, and it is only upon this ground that I am anxious about their preservation and appearance; and I cannot help having a little of a feeling expressed by Wordsworth, that the fame they produce the author [alluding, no doubt, to *Salmonia*, which had then been published and praised] is an omen that they are not useless even to the present generation." On the 18th February he went into the Campagna on horseback, and writing on the following day, expressed hope, not indeed of recovery of his entire strength of limbs, but at least their best "invalid tone." The very next day, just as he had finished an addition to the last Dialogue of his "*Consolations in Travel*," he experienced a fresh paralytic attack, affecting his right side. Dr. Jenks, an English physician, then practising in Rome, who was called in, thus describes it in a letter of the 23rd, addressed to Lady Davy:—

I may premise my statement [he says] by telling you that Sir Humphry has passed his time in this city in almost entire seclusion, sometimes pursuing his favourite amusement of shooting, sometimes engaged in experiments upon the Torpedo, and other objects of natural history, filling up his hours of leisure at home in dictating to Mr. Tobin, or in hearing him read. I am afraid he has occupied himself rather too assidu-

ously in intellectual employment of late ; but of this he will not bear to be told ; certain it is, however, that during the exercise of mind requisite in dictating to Mr. Tobin, it was that he first discovered that his right leg and arm were affected ; and in spite of all remonstrance, he has continued to pursue the same occupation every day since.

At the time of this attack I was in Malta. As soon as it was practicable I joined him, but owing to the slowness of communication then—before the telegraph with its lightning speed gave intelligence, and before steam packets plied the Mediterranean—it was the 16th March before I reached him. In the *Memoirs of his Life*, details are given of this our meeting, describing the state in which I found him, seemingly dying, and believing himself to be dying ; how he rallied, and to such an extent as to inspire hope, feeble though it was, of recovery. A note, the last he ever wrote, brief as it is, denotes strongly this state. How well I remember the occasion. Hearing that I was writing to my sister—it was on the 20th April—he said, “ Let me add a word,” or to that effect. The note is now before me ; I am tempted to transcribe it.

My dear Sister—I am very ill ; but, thanks to my dearest John, still alive. God bless you all !

H. DAVY.

Lady Davy had joined us about a fortnight before, early in April. By the 30th of that month he had so far improved as to be able to leave Rome. We

travelled by easy stages northwards, towards Geneva, which we reached on the 28th of May. That day was his last. After retiring to rest—early the following morning—he had another seizure, which was almost instantaneously fatal.

In the Memoirs of his Life, pretty ample details will be found of the whole of this period, of his wanderings, of his occupations, and of his literary labours—these latter in part embodied in his *Salmonia*, and that other little work, so truly entitled “*Consolations in Travel; or, the Last Days of a Philosopher.*” The following letters, written at this period, in themselves will afford a record of what he did, experienced, and suffered. They are only a selection; the reading the whole of them (there are no less than forty-eight remaining, written to Lady Davy during his first and second sojourn as an invalid abroad) are affecting beyond the power of utterance, at least to me, and the more especially when I think of his loving nature, his social qualities, and, at the same time, of his solitary wanderings, his unrepining, stoical endurance, fighting against sickness and fate, as he expresses it in one of his letters, believing that he had still duties to perform. He affords, I may remark, a striking example that scientific glory is no compensation for the want of domestic happiness; and if I may advert again to his mated companion—and it is with renewed sorrow—that those intellectual qualities which excite admiration and fascinate in society, ill supply the place of the gentle virtues which contribute to that

happiness. Further I may say, and it is with satisfaction, that tried as he was, he also is an example of the consolations of philosophy, and how relief in pain and suffering, bodily pain and suffering, can be afforded by the abstracting power of mind, the exercise of its faculties, and the contemplation of nature—that contemplation of it in love and admiration, ascending from effect to cause, from the created to the Creator. At Ravenna he thus expresses himself:—

Oh, couldst thou be with me, daughter of heaven,
Urania ! I have now no other love :
For time hath withered all the beauteous flowers
That once adorn'd my youthful coronet :
With thee I still may live a little space,
And hope for better intellectual light ;
With thee I may e'en still in vernal times
Look upon nature with a poet's eye,
Nursing those lofty thoughts that in the mind
Spontaneous rise, blending their sacred powers
With images from mountain and from flood.

Of the letters which follow, few need any comment. None of them, with the exception of two, have before appeared in print. Where asterisks occur in them, it is chiefly to mark passages omitted, descriptive of symptoms in his valetudinary state, the insertion of which is now needless. For many more letters, especially to myself, I may refer to the *Memoirs of his Life*. In the arrangement of those selected, the order of their insertion has been guided mainly by their respective dates, keeping together,

when their dates are not far apart, those addressed to the same person. The two first, however, which are given, are an exception, one from an arch-duke of Austria, the other from the hereditary prince of Denmark. The temptation to introduce them is the same as that already mentioned, and also for the giving of a translation of them. In a letter to Lady Davy, of the 11th February, 1829, alluding to that from the Prince of Denmark, just after receiving it, he remarks, "It is delightful to know one is not forgotten by friends, and it is in human nature to be pleased with the recollection of *the heir to a throne.*"

Vordernberg, in Stiria, li 13 Aprile, 1827.

Caro Sir Humphry Davy—Ho ricevuta il pregiato di lei foglio dei 18 di Marzo da Ravenna durante il mio soggiorno nella Stiria, e mi affretto di renderle noto, che la memoria e le altre sue opere speditemi per mezzo del Principe Esterhazy mi furono rimesse. Non sarà necessario ch'io le dica, di quanto interesse per me ne fosse il contenuto, ma spero, che le riuscirà grato il sapere che ne feci un dono alla libreria del Gioanneo a Gratz.

Ho scritto al Governatore della Carniola e Carinzia, Barone di Schmidburg raccomandandogli caldamente la di lei persona non meno che gl'oggetti scientifici, di quali ella si vuole occupare in quelle provincie. Il governatore non mancherà d'assisterle per quanto da lui dipende ogniqua volta ella si compiacerà d'indirizzarse a lui. Riguardo alla Stiria io mi rivolgerò al Governatore Conte di Hartig, e se verrà a Gratz troverà il Dr. Anker, custode e professore di mineralogia al Gioanneo sempre pronto a soddisfarle in tutto. Spero, che l'aria salubre di queste provincie contribuirà certamente all'intero suo ristabilimento, almeno glielo auguro sinceramente.

Godo nel lusingarmi ch'ella capitando per avventura nelle mie vicinanze mi favorirà d'una visita. Il luogo del mio soggiorno ordinario non mancherà d'interesse per un letterato di tal peso, ed a me farebbe sommo piacere di rivedere *il mio Presidente* come *socio* d'un Istituto meritamente tanto celebre. Spero ch'ella mi favorirà di quando in quando di sue notizie, ed augurandole di nuovo bona salute onde si possa occupare di buon grado degli experimenti progettati, passo a dichiararmi colla maggiore stima possibile.

Suo affezionato,
GIOVANNI, Arciduca d'Austria.

[TRANSLATION.]

Vordernberg, in Stiria, April 13, 1827.

Dear Sir Humphry Davy—I received your esteemed letter of the 18th of March from Ravenna, during my residence in Stiria; and I hasten to tell you that the memoir and your other works, forwarded to me through Prince Esterhazy, have also been received. I need not tell you how interesting to me the contents of these have been, but I think it will give you pleasure to know that I have made a gift of them to the Library of Gioannea, at Gratz.

I have written to the governor of Carniola, at Carinzie, Baron Schmidburg, warmly recommending yourself to his attention, not less than the objects which may occupy you in those provinces. He will not fail to aid you so far as in him lies, at any time that you may have need of his services. In regard to Stiria, you will meet like aid from the Governor, Count Hartig; and should you visit Gratz, you will find in Dr. Anker, the curator and professor of the mineralogical department at the Gioannea, one always ready to meet your wishes in all things. The good air of this province will, I trust, without fail, contribute to the complete recovery of your health; at least, I indulge in the happy augury.

I please myself with the thought, that should you find yourself within my neighbourhood during your travels, you will favour me with a visit. The place of my usual residence is not wanting in interest for one so widely informed as you are, and to me it would afford the highest gratification, as the associate of an institute so justly celebrated, to see my

president again. I trust that you will, from time to time, favour me with tidings of your welfare; and in good hope for you of the restored health which may enable you cheerfully to return to your projected experiments, I remain, with the highest esteem,

Your affectionate,

JOHN, Archduke of Austria.

From the Hereditary Prince of Denmark.

Copenhagen, ce 5 Mars, 1828.

Monsieur—L'incertitude seule où adresser ma lettre a pu la retarder à ce point, mais l'avis que m'a donné notre ami Monticelli que vous étiez allé aux Isles Ioniennes d'où enfin, je suppose que vous retournerez par Naples, m'engage à envoyer ces lignes sous son adresse et je me fie à lui qu'il saura en tout cas vous les faire parvenir.

Elles doivent vous dire que j'ai reçu dans le temps la masse météorique qui, venue de Buenos Ayres, offre un intérêt particulier par sa ressemblance avec l'acier. Elle orne actuellement ma collection en souvenir de l'ami auquel je la dois. J'eus en même temps le plaisir de recevoir votre mémoire sur l'électro-chymie, que je prêtai d'abord à Œrsted, et qui vous écrira peut-être un jour à ce sujet.

Je n'ai rien de particulier à vous annoncer en fait de science. Le Docteur Pringel, [?] qui vous avez peut-être vu en Danemark, va en Groënland, et fera des recherches géologiques, comme aussi sur l'effet de l'aimant dans ces régions polaires. Nous avons vu l'automne passé quelques aurores boréales d'une grande beauté, ce que depuis nombre d'années on n'avait pas vu chez nous.

Il me ferait beaucoup de peine si des raisons de santé vous ont engagé à faire ce voyage aux Isles Ioniennes, mais en ce cas je désire aussi qu'il aye un succès complet.

Je serai bien charmé de recevoir de vos nouvelles, étant à jamais, Monsieur,

Votre tout affectionné,

CHRISTIAN FREDERIC.

[TRANSLATION.]

Copenhagen, March 5, 1828.

Sir—Nothing but the uncertainty as to what place a letter might find you, has thus long kept me silent, but the information now given me by our friend Monticelli, that you are gone to visit the Ionian Islands,¹ from whence I suppose you will return by Naples, makes me venture to send you these lines under his cover, trusting, that through him, they will not fail to reach your hands.

I have wished much to tell you that I received in due time the meteoric stone from Buenos Ayres, which is peculiarly interesting, from its resemblance to steel. It now adorns my collection, in remembrance of the friend to whom I owe it. I had at the same time the pleasure of receiving your memoir on electro-chemistry. I have lent it to Ærsted, who will probably soon write to you on the subject.

I have nothing particular to mention relating to science. Dr. Pringel, [?]² whom I think you saw in Denmark, is about to proceed to Greenland, where he will make geological researches, as also researches on the effect of the magnet in those polar regions. We observed here, during last autumn, some aurora-boreales of great beauty, such as have not for many years been seen in our heavens.

I shall regret if it is from reasons of ill health that you have been induced to visit the Ionian Islands, but if so, I trust that recovery may be the result. I shall be delighted to receive good tidings of you, being always, Sir,

Your entirely affectionate,

CHRISTIAN FREDERIC.

¹ This was a mistake. ² The name in the MS. is obscurely written.

To T. A. Knight, Esq.

26, Park Street, December 10 [1826?].

My dear Sir—I have done everything you wished for Mr. Allan at the British Museum.

I continue very much indisposed, and I am advised by my physicians to try a journey to the south of Europe, which I trust I shall attempt. I suffer from almost constant pain in the region of the heart and chest.

I am sorry I did not see Mr. Andrew on his return, which I should have been most happy to have done.

Lord Lansdowne has taken the chair of the Zoological Society. This gives it a chance of existence, for both his influence and talents are likely to be useful to a nascent society.

I have been twice at the British Museum,¹ but I despair of anything being done there for natural history. The Trustees think of nothing but the arts, and money is only obtained for these objects.

A thousand thanks for your kind invitation. There is, I assure you, no place that I remember with more real satisfaction than Downton; and the genuine kindness and hospitality that I have always experienced at your delightful mansion, will always make me turn to the recollections with gratitude: but my plans are now nearly fixed for a continental excursion.

I am, with best respects to Mrs. and Miss Knight, always,
my dear Sir,

Your sincerely obliged,

H. DAVY.

¹ As President of the Royal Society, he was one of the trustees.

To the Same.

Ravenna, April 1, 1827.

My dear Sir—I felt very much the kindness of your last letter, and I am grateful both for the invitation and the advice it contained. I could not answer it in England, for soon after I received it I was seized with the violent attack of illness, which I consider as the crisis of my complaint, and which has clearly shown the cause of the long continued and severe indisposition which has afflicted me—a determination of blood to the head. I have not suffered so much as Lord Liverpool; and I am gradually recovering by the entire absence of all business or exciting causes, by extremely low living, and the occasional use of leeches.

By the kindness of the governor of the province, the amiable prelate Spada,¹ I am lodged in the apostolic palace here, and I have the most perfect quiet, and I take horse exercise every day, and have all the comforts an invalid can require. My brother, Dr. Davy, who has till lately been constantly with me, thinks I shall completely recover, and having gained considerably the use of my limbs, I hope I shall regain my strength altogether. Pardon this long account of myself; but I know your good will towards me, and I am sure you will receive this account of my illness, in which hope is predominant, with pleasure.

I cannot as yet write or read much, and consequently I can give you nothing either in the way of news or of science. I had last week got a torpedo alive, on which I intended to make some magnetic experiments, but he died before I could gain any result. I hope, however, soon to make these researches, which are very interesting. Sunshine being one of

¹ This was a mistake; he never entered the church; and is now a married man, and living in happy retirement, as I have been informed, following science and literature.

the blessings of this climate in spring, I am likewise trying some experiments on its magnetising powers; and in this path it is scarcely possible to walk without new results.

You are anxious to have fruit in January and February, and I dare say you will compel nature to obey your will. I think it right to mention to you that I have had constantly *fresh* grapes, I think as good as those of autumn: they are preserved by being kept in bottles well closed, before they were ripe. They are thick skinned and a little shrivelled, but their flavour good, and now perfectly saccharine. Probably the experiment would not succeed in our damp climate; here continued damp injures them.

Now I will give you a Waltonian anecdote. In my ride last week I saw a man with a fishing rod and a large basket full. I asked him what he was taking. He said frogs. How? I asked. He showed me his apparatus:—a *small* dry frog was fastened to a string, so that the fore feet made hooks; and in throwing this like a fly, keeping it in a continual motion, the frogs jump at it on the surface of the water, and it is not uncommon to take two or three hundred in a day. The frog, like the eagle, eats nothing dead, and snaps up every small thing that moves.

I hope you have received a copy of my discourses. With kindest and most respectful remembrances to Mrs. and Miss Knight, and best wishes to my brother sportsman, Mr. A., I am, my dear sir,

Very sincerely yours,

H. DAVY.

I shall go to the Julian Alps in a short time: my address till the beginning of June will be Posta Restante, Laybach, Carniola.

To the Same.

Sillian source of the Drave, E. Tyrol, July 30, 1827.

My dear Sir—Many thanks for the letter you were so kind as to address to me at Laybach. I comply with your request in giving you some account of myself. I wish it were a better one. My progress towards recovery, though slow, was still distinct, till the end of May, when the rise of temperature seemed to put a stop to it, and since that time I have been going from place to place to avoid *heat*, which, by increasing the circulation, fills the vessels in the brain, and obliges me to starve, bleed, and blister. Since I have been amongst these high mountains, where the thermometer does not rise to 70°, even in the brightest day, and sinks below 50° in the night, I have been sensibly better, and I shall stay in the region of snows till the dog-days are past, and then slowly travel on towards the Italian frontier, seeking a temperature between 55° and 45°, which is most suited to my complaint. I have recovered to a certain extent the use of my limbs, but my complete re-establishment, if I am ever so fortunate as to obtain it, must be a work of time.

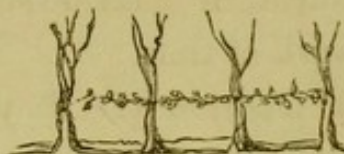
In your letter you mention the Royal Society. I shall always be strongly attached to that body, and do everything in my power to promote its glory and prosperity; but in the present state of my health it would be impossible for me to fulfil the duties of the chair, and to attempt it even would be dangerous. Had I recovered as rapidly as my physicians promised, I should have returned this autumn, and have done what was thought best; but I feel that to attempt business in my present state, when even writing a letter sends blood to distend the vessels in the brain, would be trifling with my life, which I still hope may be turned to some account for the interests of science. I resign the chair at the first meeting of the society.

I have been amusing myself a little with natural history,

and have collected some information which I think is curious, with respect to the migrations of birds and fishes, which are governed principally by three causes, sense of temperature, appetite for food, and the sexual appetite. The salmo hucho flies from heat in the early spring, and from cold in the autumn, and fishes in general seem to be much influenced by this cause. The char will live in rivers when their temperature in summer is not above 48° , and I have seen some kept in a stream for twelve months, in which the sexual organs were developing.

You, of course, know the kohl rabin.¹ I wonder it is not more cultivated in England and Scotland; it is a most excellent vegetable, and has been for some time a good part of my food.

In the Friul, there is a mode of cultivating vines which appears to me good. The vine is carried from standard cherry tree to tree, a few feet distance only, and a few perpendicular branches only are left on the cherry, and only one branch of the vine is carried thus—



and a single vine to each cherry-tree. The cherry ripens before the grapes, and the leaves do not shade the grapes. At Goritzia they make excellent wine from these vineyards, where the vines are more exposed to the sun than in even the French vineyards; they are never more than five or six feet high, that is, the cherry-trees and the vines about ten or twelve feet long.

With kindest remembrances to all your family, hoping to hear from you at Laybach, Illyria, to which place I return in three weeks,

I am, my dear sir, very sincerely yours,

H. DAVY.

¹ In England written kohl rabi.

To Lady Davy.

Ravenna, March 15, 1827.

My dear Jane—I have just received your letter No. 3; that addressed Turin has not yet reached me. By this post I have likewise a letter from my brother from Ancona, on his road to Corfu, who did not find your promised letter. Before you receive this letter, you will have heard from him. I was better when he left me than I have been since.

* * * * *

Madame Guiccioli is gone to Rome, and my only companion now is the vice legate, who continues to show me all the amiable attentions I could claim from a brother. As I am so perfectly quiet here, I shall remain perhaps a fortnight or three weeks longer; but this must depend upon circumstances. I must endeavour for some months to live in a *cool*, rather than a *warm* climate; and it is my design, if I continue to amend, to go in the middle of April to the Friul, and so on slowly to the Alps of Styria and Carniola, and perhaps to the Tyrol and Switzerland, and to return as the sun declines in autumn towards Italy.

This day is a cold rainy day, the temperature nearly ten degrees less than yesterday, namely, 52°, but for nearly a week we have had bright sunshine and clear blue skies, and the pineta has many beauties peculiar to it in winter, or which is the same, early spring. These grand spreading pines, the little clumps of juniper below them, and the thickets where the violet peeps forth into the green herbage, with views of the blue Adriatic on one side, and of the snow-covered Apennines on the other, have an effect independent of their association with the spot where the Roman Empire made her last stand, and, born amidst the mountains, expired in the marshes.

I cannot divine who will succeed Lord Liverpool; I hope not Mr. Canning, for with all his talents and eloquence, I fear he is too fond of *popular* applause. * * * Lord Lans-

downe should have my voice were I in the cabinet, but whoever is minister, he must prepare to emancipate the Catholics, without which there is neither peace nor security for England; but I will not write politics, though I am becoming far more apostolic in my creed as I grow older, and see how much good the old institutions have done, and how little has arisen from revolutionary opinions in *Europe*, at least. God bless you, my dear Jane!

Your truly affectionate,

H. DAVY.

To the Same.

Ravenna, March 30, 1827.

My dear Jane—I have just received your last letter. I am concerned at the death of Sir George Beaumont, an excellent man with good taste, polished manners, and the most liberal views in everything belonging to art and literature. I regret his death on account of his friends; for himself, an old age, with various infirmities and sufferings, is spared. Life without the power of enjoyment is not worth bearing unless for some great and good object, and then it is a glorious martyrdom, for when mind is superior to body, the intellectual, or moral, or religious enthusiasm destroys physical pain, and the imagination is the only *creative* faculty of our nature.

I think I gain ground in conquering the effects of the determination of blood to the brain.

* * * * *

I *ride* every day some miles, and lead a life of regular habits, and measured food and drink. My weekly bill would surprise a London epicure both as to fare and price: a large brocoli or cauliflower, 2*d.*; spinach, 2*d.*; teal, 3½*d.*; woodcock, 8*d.*; capon, 1*s.* 6*d.*; snipe, 2*d.*; great snipe, 4*d.*, and so on.

I have no society, and I seek for none. The excellent vice legate comes to play at *ecarté* with me every other evening;

as he lives in the same house, I can always see him when I like. His duties as governor of the province confine him much, so that he is never from home. His kindness and attention to me I cannot speak of without tears of gratitude in my eyes. He has sent everywhere for whatever he thought could be agreeable to me, and I am this morning going to experiment on a live torpedo, which he has had the goodness to procure for me with much difficulty, and at some expense. He has got me preserved peaches from Ferrara, and grapes from Macerata, and having couriers at his command, he has done for me what I could not have done for myself, and what *no other* person could have done for me.

Madame Guiccioli has been gone nearly three weeks, and does not return here, and the vice legate informs me that she is obliged to live in Florence permanently, in consequence of a contract with the *marito*, who allows her on certain conditions 150 crowns per month, or between £400 and £500 a-year.

We have had another fall of snow, or rather of sleet, here, which has covered the mountains, but since this fall the weather is become delightful, and the pineta is beginning to display its *vernal* beauties. It is a very imposing scene, where Dante wooed the divine muse in the mortal lineaments impressed upon the memory by the image of Beatrice: the grand and gigantic fan-formed pines above; the thorns, and acacias, and juniper in blossom, or berry below; the grass, with its gems of violets in such profusion as to give it a purple hue; the Apennines covered with snow on one side, and the sapphire Adriatic on the other, and this a scene of perfect solitude, except now and then an eagle or a crane soaring above the pines, but even with this rarely a sound of life. I think of remaining here a week or ten days longer, and then I shall slowly progress towards the Alps, and I shall stop at Gorizia for a day or two, if the Count de Thun is still alive; if not, I shall go on to Wippach, and take lodgings there, if I can find

them, till May. I shall, I hope, find some amusement in fishing. Pray write to me at Wippach, near Trieste.

Your most affectionate,

H. DAVY.

The temperature to-day is delightful, 63° or 64°.

To the Same.

Apostolic Palace, Ravenna, April 7, 1827.

My dear Jane—As more than a solar month has elapsed since I wrote to you from Ravenna, and as all the mountain passes are now open, I had hoped to have received a letter from you by one of the last posts, but I am disappointed. I trust, however, I shall find one at Bologna, whither I return the day after to-morrow. My few weeks' sojourn here, though a little melancholy, has been salutary to me from the entire absence of all exciting causes, and I shall quit with regret my most amiable prelate, and the shade of the pineta. You will perhaps be surprised that I should regret shade so early in April, but for the last four days the sun has been scorching, and a cold wind has made the weather very unpleasant for an invalid, for whom shade from sun and a shelter from wind are desirable. I was considerably better, but a severe cold in the head has rather thrown me back, and obliged me to debilitate myself by leeches and fasting.

* * * * *

When you see Madame de T., thank her in my name, and beg her to thank the proper authorities for me for the civilities I received in passing the French douanes; indeed, I have as yet had nothing but perfect ease on this head, and I have never been stopped a minute.

I heard yesterday only of the death of Laplace and of

Volta. Two of the great lights of the age are extinct—one the first in mathematical, the other in physical science.

* * * * *

God bless you, my dear Jane!

Yours most affectionately,

H. DAVY.

To the Same.

Lubiana, April 25, 1827.

My dear Jane—* * * I have been here now since the 18th, and I have always liked the place; the neighbourhood abounds in beautiful scenery, and the inn in which I am is tolerable, and I can procure my vegetable diet in sufficient quantity. I see from my window the magnificent chain of mountains of the central Austrian provinces, and the blue Save is within a half an hour's ride. Having no society, and being fit for none, my amusements are of the most simple kind; the objects of Nature in their two most remote bearings, poetical feeling and scientific association; and I watch for hours the formation and the progress of the clouds on the chain of the Loibel, their change of colour and forms, and make experiments on their effect in preventing the cooling influence of the snowy Alps. I have as yet had no fishing, but I hope for it every day, as soon as the rivers sink, and the fall of the Lubiana river offers a beautiful spot for this amusement. But in staying here, health is my principal research; the temperature fits my head, being below 60°, and I have not once had occasion to apply leeches.

* * * * *

The Governor here has been very civil, and the Archduke John has written to me a very amiable letter, inviting me to make His Imperial Highness a visit in Styria.

You speak in your last letter of a work of Brougham; I think I can anticipate his mode of treating the subject. I

become, however, every day more sceptical as to the use of making or endeavouring to make the people philosophers. Happiness is the great object of existence, and knowledge is good only so far as it promotes happiness; few persons ever attain the Socratic degree of knowledge to know their own *entire ignorance*, and scepticism and discontent are the usual *unripe fruits* of this tree—the *only fruits* which the people can gather; but I will say no more, knowing how unpopular my arguments will be; yet I could say *much*. Pray mention Miss White in your next letter, and remember me wherever I create an interest. God bless you!

Your most affectionate,

H. DAVY.

My next address, Salzburg.

To the Same.

Laybach, May 19, 1827.

My dear Jane—I received your letter, addressed Wippach, here, and likewise your letter with the direction to Laybach. I am glad to hear of your perfect re-establishment, and with health and the society of London, which you are so well fitted to ornament and enjoy, your “*viva la felicità*” is much more secure than any hope belonging to me.

I have lingered on here, day after day, fearing that it would be too cold on the higher Alps, and because the temperature and the scenery have suited me. We have had some glorious days of spring, which, if in health, I should have enjoyed; but even this, the most genial of the months, has not restored me to the perfect use of my limbs; and though it is wrong, I cannot help feeling sometimes the privation of hope, I will not say, despair.

* * * * *

I see by the Frankfort papers, which the governor here has sent me, that the administration is to a certain extent settled.

I know not what to think on this occasion. The *Catholic question* must be carried ; but this appears to me the only true point of union between Mr. Canning and the Whigs, and I adhere to my opinion that Lord Lansdowne ought not to accept office *under* a man who, however splendid his oratorical talents, has not uniformly followed the higher kind of glory, and who, I think (I wish I may be mistaken), has a dangerous lust after popularity. If Lord Dudley applies to business, he will make an excellent Foreign Minister, and he is a better philosopher than Mr. Canning ; yet still I should fear his prejudices in a treaty with Austria. Mr. Canning might leave behind him a great and undying name, if, making the * * *¹ of the Catholics his great aim, he endeavoured to improve the condition of the country by promoting all liberal institutions, and all plans of real improvement, and put down jobbing altogether ; but though I differ from Mr. Peel, *toto cælo*, in one great question, I still think him the ablest man of the two, and the honestest, and I admire his conduct the more, as the death of the Duke of York has set aside the possibility of a selfish nature. I am truly glad Lord Bathurst and Lord Melville are out of office, and were I to express my joy on the occasion, it would, I fear, be intemperate, and might be illiberal ; but Crocker at *the Admiralty* ! this is too bad ; and even *John Bull* cannot be worth this.

* * * * *

Whilst I am writing I look every now and then at the sterner Alps, which every moment change in character ; there are beautiful white clouds resting upon the lower region, the top capped with snow is bright in sunshine, and the plain between the mountains and Laybach is rich in all the hues of spring. God bless you, my dear Jane !

Your affectionate,

H. DAVY.

¹ The word omitted is too indistinctly written to be deciphered.

To the Same.

Admont, Styria, June 2, 1827.

My dear Jane—I am once more amongst the kind and hospitable Brothers of Admont. Their kindness I can enjoy ; but, unfortunately, the state of my health still prevents me from enjoying their hospitality in society. The scenery about this place is now, I think, more beautiful than when we saw it together, because mature spring is more beautiful than completed summer. I fled here from the heat of lower Styria ; but even here the thermometer is above 60°, and they say the month of May was never so warm before. It was my intention to have visited the Archduke John, and likewise Countess Purgstall, but I did not find myself equal to these visits, and I was afraid of the temperature of Hainfeld. Between 54° and 64° I am comfortable, but when the heat rises to 70° I become feverish and have headaches.

The worthy Brothers here make much of the book which I was able to procure for them, and it is worthy of a place in their magnificent library.

My plans must be regulated by the state of my health, and by the heat of the summer. If this is high I shall keep always amongst the snows of the Alps. If I do not get well, my brother will come to me in Carniola, and I have now full confidence in his medical advice and treatment. From Trieste it is only a voyage of a few days to Corfu. I hope you and all my friends are well. I beg you will congratulate the Blighs¹ in my name—I could say kind things ; but I fear to trust myself with tenderness. God bless you !

Your affectionate,

H. DAVY.

¹ On the occasion of a marriage in that noble family.

To the Same.

Salzburg, June 30, 1827.

My dear Jane—On my arrival here yesterday, I found five letters from you, two from Mr. Gilbert, one from Lord Gage, one from my brother, and one from Mme. Martinetti, for all of which I am very grateful.

I continue much as I was when I wrote to you from Admont, and have gained little since I left Laybach.

* * * * *

I am a good deal affected by the death of poor Miss White, yet I know not why I should be ; it was a delivery from a dark, and gloomy, and protracted death-bed ; yet there was something in her philosophy and social habits which threw a peculiar charm over the last days of her life, and I regret her not merely as a friend, but as a practical example of unaffected moral strength and stoical patience in bearing pain, and suffering the evils of life with appearance of cheerfulness.

I am obliged to you for your attentions to the Knights and the Vivians. Young Mr. Knight is a great favourite of mine, and I want to bring about a match between him and another great favourite of mine, Miss H. B. I wish you could let them see each other, though now, perhaps, it is too late in the season. I have talked of this in joke, but I am serious in thinking it would be an exceedingly good marriage for both parties.

If I had perfectly recovered, I know not what I should have done with respect to the P., under the auspices of a new and more enlightened government ; but my state of health renders the resignation *absolutely* necessary. To attempt business this year would be to prepare for another attack. The vessels of the brain very slowly recover their tone ; the slightest causes, even the writing of this letter, sends blood into them, and it is only by the strictest discipline, physical and mental, that I can hope to recover. I shall give no

opinion to the Fellows of the Society respecting my successor ; but I am exceedingly pleased with the idea of Mr. Peel becoming P.R.S. He has wealth and influence, and has no scientific glory to awaken jealousy, and may be useful by his parliamentary talents to men of science.

The prosperity of the Royal Society will always be very dear to me, and there is no period of my life to which I look back with more real satisfaction than the six years of labour for the interests of that body. I never *was*, and never could be, unpopular with the active and leading members, as six unanimous elections proved ; but because I did not choose the Society to be a tool of Mr. ——'s journal jobs, and resisted the admission of improper members, I had some enemies, who were listened to and encouraged from Lady ——'s chair. I shall not name them, but, as Lord Byron has said, " my curse shall be forgiveness."

* * * * *

I shall go to-morrow on the road to Munich, and from Munich by a new road to Inspruck. I am now more melancholy than usual, for the state of my eyes obliges me almost to renounce my favourite amusement, fishing, which was a great resource to me, and which I think greatly strengthened my arm and hand. I hope, however, to resume it, *et in hac spe, et in illa utilitatis vivo*.

Remember me to all friends who take an interest in me. God bless you !

Your affectionate,

H. DAVY.

To the Same.

Constance, July 13, 1827.

My dear Jane—Since I wrote to you at Munich, the hot weather has induced me to make a little change in my plans,

and I shall go to Inspruck by the elevated road, which crosses the valley of the Rhine ; and I think I have done wisely, for it is cooler than in Bavaria or the Upper Tyrol.

* * * * *

Dr. Babington's letter expressed a wish that I should *return now* to settle the business of the Royal Society. Were I to follow his advice, I am sure it would *settle* me ; and whether medically, morally, or metaphysically considered, I am sure I have done right in not following it. My only chance of recovery is in *entire repose*, and I have even given up angling, and amuse myself by dreaming and writing a very little, and studying the natural history of fishes. Though alone, I am not melancholy ; the weakness of my eyes is the only *distressing* symptom, and I think the principal cause of this is the bright and incessant sunshine we have had for a fortnight, and I now use green spectacles, and have given up my glass of wine per day, I think with advantage.

There is nothing worth seeing here ; but the head of the lake of Bregentz is fine, and the mountains of Appenzel sublime. The road from Bavaria is likewise picturesque. I shall go to Schafhausen in my route, and cross to Wallenstadt and the valley of the Rhine, to Inspruck. Having seen the magnificent fall of the Traun full of water, I am anxious to see the Rhine under the same circumstances, that my memory may remain fresh as to what I used to consider as one of the grandest objects in Europe. I hope you are quite well, and somewhere in *green shade*. My thermometer here (thank God !) marks only 68°, and there is a cool breeze from the lake, though a cloudless sky. God bless you !

Your most affectionate,

H. DAVY.

To the Same.

Inspruck, July 24, 1827.

My dear Jane—

* * * * *

I wrote to you from Constance. I have since passed by Zurich and Glarus, and the Lake of Wallenstadt, to the western frontier of the Tyrol. From the Lake of Wallenstadt to Nassereit the scenery is very magnificent, I think superior to anything I have seen before; the valleys are extremely narrow, like those of Styria, but upon a grander scale, and the glacier and the bare rock immediately above you, rising almost to mid-heaven, have a grand effect. Schafhausen strikes me less than when we saw it together: but I have since seen the falls of the Gotha and the Glommen; the first is equal, if not superior, to it in beauty, and the last exceeds it much in magnitude, height, and the effect of power of water. I like the Austrian states to travel in much better than the Swiss—the people in Switzerland are dreadfully imposing, and the bustle and noise of a Swiss inn are very wearisome to an invalid.

For roads, give me the Austrian; the two new ones from the Tyrol to Italy and to Switzerland are the rivals, if not superior, to the Simplon, and the grandeur and beauty of the scenery of those parts of them which I have passed, are unequalled.

I wrote to you that I had sent my determination to the Royal Society, not to be a candidate for the chair at the next election. This is not a matter of choice, but of necessity, in the present state of my health. I shall give myself all the chances possible of recovery, and repose is absolutely necessary for my nerves, even if I conquer the tendency of the vessels of the brain to accumulate blood, which I think is possible. Whether I recover or die, I shall be contented, and meet

either fate with a calmness, not, I hope, unworthy of the philosophy which it is my ambition to profess. God bless you !

Your affectionate,

H. DAVY.

To the Same.

Laybach, August 10, 1827.

My dear Jane— * * * The temperature here is as low as anywhere on the continent, for *vines* do not grow here, and it is now, in one of the brightest days of August, only 69°. I have found no place agree with me so well, and I have resources of *exercise*, which I could find nowhere else.

* * * * *

You once *talked* of passing *this* winter in Italy ; but I hope your plans will be entirely guided by the state of your health and feelings. Your society would undoubtedly be a very great resource to me, but I am so well aware of my own present unfitness for society, that I would not have you risk the chance of an uncomfortable moment on my account. I often read Lord Byron's *Euthanasia* ; it is the only case, probably, where my feelings perfectly coincide with what his were. Though *solitary*, I am not *sad*, and now my eyes are better, I can amuse myself with writing, and there are some thoughts and opinions which I wish to connect in composition, that I believe are original. I have here, likewise, delightful walks, and my boat always ready, and I command all the comforts that a tolerable inn can give, at a very small expense. * * *

God bless you, my dear Jane !

Your affectionate,

H. DAVY.

To the Same.

Wurzen, August 20, 1827.

My dear Jane—I wrote to you last week that I found myself better here, and the temperature agreed with me so well, and the scenery was so beautiful, and the master of the inn and the post lent me a quiet little Croat horse, which suited me perfectly—all these circumstances, as well as the hope of getting my packet and my letters from Laybach, and of hearing from or seeing my brother, have induced me to stay. The post has arrived this morning, and has brought nothing; and a new leaf is open in the chapter of accidents, which makes me quite undecided as to my route. Till last night, the air was cool, but not cold; some rain fell the 23rd, which assumed the form of snow on the very summits of the mountains; but the temperature yesterday evening was that which suits me, but 56° or 58° . What was my surprise at getting out of bed this morning, to see the roofs of the houses covered with snow, and the air darkened by large heavy flakes of snow. It has been snowing all the morning, and the thermometer in the window is only 38° and my hands are stiff with cold.

* * * * *

From what I hear in this secluded corner of the Alps, I fear there is no hope that the report of Mr. Canning's death is unfounded. What a sensation will this event occasion in Europe! what new political struggles in England! A flame of genius and a light of glory is extinguished in this last of our great orators: and what a fate! He reaches the pinnacle which has been for years the object of his ambition, and reaches it but to fall: so entirely are the lives, the plans, and destinies of men independent of their own will, so completely are they instruments in combinations of a higher and more exalted intelligence which they can never understand!

I repeat what I said in my last letter, my warmest wish

that Mr. Clarke's¹ prescriptions may have restored your stomach to its tone, and your spirits to their usual animated pitch.

God bless you, my dear Jane ! and believe me,

Most affectionately and truly yours,

H. DAVY.

To the Same.

Wurzen, Source of the Save, August 22, 1827.

My dear Jane—As I think my last two letters may have alarmed you, I write a few lines to say that I am better ; and pray let Dr. Babington know this. The cool air of the mountains, and the glorious scenery of this crest of the Noric Alps, have completely removed all my bilious symptoms. The clouds of the mountains likewise have been useful to my eyes, which I feel stronger. I wish you were here. The inn in which I am is tolerable, and the people very civil ; and there are excellent trout, and quails, and landrails.

The mountains here are like the needles of Chamouni, of limestone, but of the noblest forms that limestone ever assumes. They surround the village on all sides, and rise with their breast of snow and crests of pointed rock into the middle sky. The source of the Save is a clear blue lake surrounded by woods, and the meadows are as green as those of Italy in April, or of England in May. Two or three miles nearer the Italian frontier, a fine clear torrent, one of the sources of the Gailen, rises from the lake of the Weeper-see, fed by the snows of Mount Manhart, a noble mountain ; and two posts below, the Isonzo boils up almost like a sea from a limestone cavern, clear, blue, and cold.

I shall stay a few days longer here to give my brother a chance of seeing me, but I have been alarmed by not seeing or hearing from him. I hardly know what to do.

¹ The late Sir Charles Clarke.

It is said here Mr. Canning is dead. I hope not. If so, of course Lord Lansdowne will be Premier, at least he ought to be.

I hope the prescriptions of your Pope in medicine, have had all the beneficial effects you anticipated, and that you are relieved, and quite well.

God bless you, my dear Jane!

I am, your most affectionate,

H. DAVY.

To the Same.

Wurzen, August 30, 1827.

My dear Jane—My health has improved so rapidly here, that I have continued in my little inn, and I now feel so much better, and my spirits so much improved, that I shall pursue my original plan of wintering in Italy. * * *

Should your feelings or inclination lead you *to the land of the sun*, I need not say what real pleasure it would give me to enjoy your society; but do not make any sacrifice on my account. It is my wish to return *very* early in the spring. I can command amusements in Italy that I can find nowhere else in the winter, and cold or heat in excess are equally prejudicial to my *vascular system*. * * * Horse exercise and shooting are the best medicines for me; and it seems to me, that since I have been able to take them within the last fortnight, I have gained both strength and flexibility of limb.

I can now also write, and am not without heroic thoughts, and I do not think either the tone or temper of my mind impaired.

It is my intention to remain under these snowy mountains a few days longer, when I shall probably be driven down into the plains by cold: the thermometer is now at my temperature of *enjoyment*, from 50° to 60°. I shall go to Laybach, where I hope to find letters from you, and by Wippach and Goritzia,

to Treviso, and it is my intention to be at Bologna about the 25th or 30th of October.

I have a letter from my brother, who has had a fever, but thanks to God is nearly recovered, and I still hope he may visit me in this country.

I am, my dear Jane, hoping you are now quite well,

Your very affectionate and faithful,

H. DAVY.

To the Same.

Greifenburg, Carinthia, September 1, 1827.

My dear Jane—I fear I have tired you by my indecisive correspondence; but I have at last resolved to pursue the plan which I projected when I left Laybach, to go on to *Baden* on the Rhine, and I am so far on my way. This is Saturday, and I hope to be at Inspruck by Thursday or Friday next. The weather and the scenery are both delightful. I was driven from Wurzen by rain and cold, but I had contentedly borne the solitude of that place for ten days. The snow has not visited the valley of the Drave, and the temperature here is to me delightful and salutary, from 54° to 58°. This day and yesterday have been like quiet, calm, cloudy October days in England. And this valley of the Upper Drave is a rival to that of the Save, and has the same characteristic peculiar features. I hope I shall have the delight of seeing you at Baden Baden. If not, I shall come to England. My course will be slow, and I can hardly hope to be at Baden in less than fifteen or sixteen days. Pray let my physicians know what an obedient patient I am. My decision was principally fixed by a letter from my brother, which took away all hopes of his immediate visit to Carniola.

God bless you, my dear Jane!

Your affectionate and faithful,

H. DAVY.

To the Same.

Mayence, September 26, 1827.

My dear Jane—I write these few lines to say I am much better, and, though very weak, free from the alarming symptoms which obliged me to have recourse to all the severe discipline to which I referred in my letter of yesterday, and I hope soon to see you in Park Street. I shall travel slowly, and perhaps, if I feel well enough, make a journey to Anvers. If you wish to cross the water, let me know by a letter addressed to me Calais. But after I have seen my medical advisers, I am entirely at your disposal. I still hope that I shall return freer than I once expected from paralytic affection, and I do not despair of perfect re-establishment. I think you will find me altered in many things—with a heart still alive to value and reply to kindness, and a disposition to recur to the brighter moments of my existence of fifteen years ago, and with a feeling that though a burnt-out flame can never be rekindled, a smothered one may be.

God bless you !

From your affectionate,

H. DAVY.

I hope it is a good omen that my paper by accident is *colour de rose*.

The following letter to Mr. Knight opens with the expression of feeling on account of the death of his son, already alluded to:—

To T. A. Knight, Esq.

Park Street, January 17, 1828.

My dear Sir—I have three or four times within the last six weeks taken up the pen and began to write to you; but I have

always laid it down again, fearing to trust myself with a subject on which I could not write without feeling deeply and great mental agitation.

I have grieved with you: in such, the most awful visitations of evil belonging to human nature, it is almost vain to attempt to offer consolation; yet, considering life as a great system in which all is for good, and believing that the intellectual and moral part of our nature is as indestructible as the atoms that compose our frames, I feel the conviction that when a mind so highly gifted, and so little selfish, is removed from the scene of being apparently so prematurely, it is to act in a better and nobler state of existence. The noblest spirits often return soonest to the source of intellectual life from which they sprung; and they are surely the happiest, whilst we are to await the trials of sorrow, sickness, and age.

I was very grateful to your most amiable and angelic daughter, Mrs. Stackhouse,¹ for a note that she wrote to me. Pray offer her my most sincere thanks.

I offer my most ardent wishes for your recovery, and that of Mrs. Knight. I know well the agony of "*spes fracta*;" but in this case, time, the only comforter, creates a new source of hope.

I wish I could give you a more satisfactory answer to your kind inquiries respecting my health. Dr. Philip has been very kind to me, "but my body does me sorely wrong." I sometimes hope, and sometimes despair, of ultimate recovery. My paralytic symptoms are much diminished; but still I cannot get rid of the stiffness of my left arm and leg. I am now amusing myself with natural history, and I hope in the spring to make some inquiries respecting the transmigrations of some of the anglers' water flies.

The garden of the Zoological Society is flourishing, and there are a good many animals collected there.

The political bark, left by Mr. Canning without a pilot,

¹ Mrs. Stackhouse Acton.

seems quite wrecked, and I believe there will be some difficulty in building another. The country is in a very critical state, and there certainly never was a moment in which less political talent appeared; but I am writing on a subject which everybody seems alike ignorant of, and the business is, I fear, in hands weak in talent, though strong in influence.

I am, my dear sir, very sincerely,

Your obliged friend,

H. DAVY.

To the Same.

26, Park Street, February 15, 1828.

My dear Sir—I gave orders when I was abroad that a copy of my Discourses to the Royal Society, and one of the fourth edition of my Lectures on Agricultural Chemistry, which I did myself the honour to dedicate to you, should be transmitted to you. As you have never mentioned these works in any of your letters to me I am anxious to know if you have received them. Should this not be the case, be so good as to let me know, and I will immediately send you copies. I likewise wish very much to hear of the state of your health, and that of Mrs. and Miss Knight. I continue much as I was, I think with some little improvement.

* * * * *

Not being able to attend to the more profound researches of science, I have been amusing myself with studying the natural history of fishes, and the insects on which they feed, and I find it a very engaging pursuit. As soon as the weather becomes mild, I shall leave London and attend to these objects with more ardour, for I do not think either the air or the society of London adapted either to the constitutional or social habits of an invalid. I think of making another tour to the Alpine regions of the continent; but I shall be very glad if possible to pay you a visit before my departure.

I have been in vain endeavouring to gain information respecting the generation of the eel. It certainly breeds in the ocean and the neighbourhood of deep water; and I suspect, notwithstanding great authorities are against me, is oviparous.

* * * * *

With kindest remembrances to Mrs. Knight and Miss Knight, and Mrs. Stackhouse, I am, my dear sir,

Very sincerely yours,

H. DAVY.

To the Same.

Park Street, March 19, 1828.

My dear Sir—I am very much obliged to you for your kind letter. I am very glad Mrs. Knight is going to change the scene. I wish you would do so too: the healing and consoling influence of time is very much assisted by new impressions. I wish I could persuade you to do as I am about to do, and make an excursion to the continent.

It was my ardent wish to pay you a visit before I left England; but I do not feel myself now sufficiently strong. I must defer it to another and a better season. The extremely severe course of diet and regimen keeps my spirits very low, and my physicians tell me this is absolutely necessary; and, whether I recover or die, I am resolved to live according to rule, and to give my constitution a fair chance.

* * * * *

I have sent a copy of my Agricultural Lectures to the Horticultural Society addressed to you. If anything it contains relating to vegetable physiology is of value it is owing to you, and in my dedication I perform at once an act of public duty and of private friendship.

Should I recover my health, I have various plans of scien-

tific labour, principally on natural history ; and in this wintry state of my mind, I live principally on hope.

I beg my kindest remembrances to Mrs. and Miss Knight. Lady Davy joins me. I am, my dear sir,

Most sincerely yours,

H. DAVY.

To Thomas Poole, Esq.

Park Street, March 26, 1828.

My dear Poole—Your letter has given me great pleasure ; first, because you, who are an enlightened judge in such matters, approve of my humble contribution to agriculture ; and, secondly, because it makes me acquainted with your kind feelings, health, and Mr. Baker's interesting pursuits. Mr. Baker appears to me to have distinctly established the point that the eel and the conger are of different species ; and from his zeal and activity, I hope the curious problem of the generation of these animals will be solved. I shall expect with impatience the results of his inquiries. Now for my health, my dear friend, I wish I could speak more favourably ; I certainly do not lose ground, but I am doubtful if I gain any ; but I do not despair. I am going, by the advice of my physicians, to try another continental journey. If I get considerably better, I shall winter in Italy, where in this case I shall hope to see you, and where I shall have an apartment ready for you in Rome. I have not been idle since I left your comfortable and hospitable house. I have finished my *Salmonia* and sent it to the press—" *Flumina amo sylvasque inglorius.*" I think you will not be displeased with this little *jeu* of my sick hours. Mr. A. was very amiable in calling on me. There is nothing that annoys me so much in my illness as my helplessness, in not being able to indulge in society.

Your grateful and affectionate friend,

H. DAVY.

The few letters which follow are selected from those written during his last continental journey, and are his very last. They are all to Lady Davy.

To Lady Davy.

Ischl, July 12, 1828.

I had hoped, my dear Jane, to have heard from you again soon after you received my last letter from Aussee, but I have been disappointed. I have now been here five weeks and I have made use of the baths and douche regularly during a month. * * * In this beautiful spot, and with the resources afforded me as an angler by the Traun, I pass my time with less tedium than probably I could do anywhere else; and it is some satisfaction to me to know that I am not a burden to anybody. George¹ is satisfied with very simple amusements, and Mr. Tobin is of an age when mere animal existence is a pleasure. We have had several thunder storms; but the weather is now of the brightest summer character, and in the middle of the day rather too warm.

Tell me what you are going to do in the autumn. I shall probably wend my way again through the valleys of Illyria to Trieste, about the end of September; and if I feel better, go on to Rome, where I hope my brother will join me. I amuse myself as much as I can by literary composition, and I have just finished a "Vision on the History of Human Existence," of which the scene is laid in the Colosseum, and in which I endeavour to establish the progressive nature of intellect and the infinite possibility of spiritual natures. My dream is as good as another, and happy are those that dream most in life, and most agreeably. I shall be glad to see a copy of my little angler's book; luckily I have a little vanity in this matter. Mrs. Damer's death I had expected. Her pilgrimage, I suspect, was much like that of dowagers in general, with the

¹ His servant.

advantage of a pursuit of which she was proud. God bless you, my dear Jane, and give you health and the enjoyment of much happiness !

Your affectionate,
H. DAVY.

The conquest in politics is where I had expected. I am very sorry Lord Dudley is unemployed. Lord F. Gower I know is following a plan of ambition belonging naturally to his mother. He has a right to success.

To the Same.

Gmunden, July 29, 1828.

My dear Jane—I have been fortunate in respect to the copy of *Salmonia* sent to Vienna: it is already in my possession. Pray receive my best thanks, and offer them to Lord Aberdeen. The book is not ill printed; but there are some strange mistakes; but they can hardly be considered as affecting the author: Rosshin for Rosshire, the county in which Loch Maree is seated; Salax and Salac for Salar. Had the book been a graphic performance of my own, these might have been expected. The plates I think tolerable, but the selection not good; the duplicates might have been omitted, and the fishes not introduced—the charr, umbla, &c., would have been more interesting; but I am contented and pleased with my little bantling, more, perhaps, than I ought to be.

Now “*paulo majora canamus*,” my vision of the Colosseum is finished, and I think you will like it. I intend it shall contain all my philosophical thoughts and poetical feelings. The plan is quite new—I think you will be pleased with the imagery of it. It is not in verse—I hope in good prose.

I was at Ischl nearly seven weeks, and took forty-two baths

and douches. I think I am better. I closed my *seton* a fortnight ago and without any ill consequences. I have occasional headaches and my leg is still weak; my arm is decidedly stronger, and I throw the fly almost as well as ever, as the fishes in this beautiful river, had they the Pythagorean language, could tell you.

Write to me at Laybach. I received no letter at Ischl after the letter of June 26th; they will now, I hope, meet me at Salzburg. From the Traun I shall go to the banks of the Save, its rival in my affections, and slowly wend my way to Trieste.

God bless you, my dear Jane! Be well and happy.

H. DAVY.

In a letter from Wurzen, of the 21st August, 1828, he says:—

I am anxious to finish my *Vision*, or rather the *Dialogues* in illustration of it. I may be mistaken; authors sometimes esteem most, like mothers, their weakest offspring; but I am satisfied with what I have done, and wish I may be able to complete it.

To the Same.

Laybach, September 1, 1828.

My dear Jane—I have received both your letters addressed to me here.

* * * * *

I am grateful to you for the account you have given me of the reception of *Salmonia*. It has almost rekindled my love of praise. I have made a number of additions; and if Murray is near being ready for another edition, I will send the corrected copy through Lord Aberdeen: I think I may venture to take this liberty with his lordship, whom I have always found kind, liberal, and good natured.

* * * * *

I am a little surprised at the reception of such a trifle as Salmonia; yet, this is in human nature, a *trifle excites* no envy or malevolence, and the flies that cover with their dirt a striking object—such as a brilliant column or a statue of marble—do not alight upon a pebble or common stone.

I hope Bath will do all you hope for, and quite re-establish you.

God bless you, my dear Jane!

Always your affectionate friend,

H. DAVY.

To the Same.

Laybach, October 5, 1828.

My dear Jane—I have received all your letters, and last the two from Trieste. I have remained here for many reasons, but I shall go to Trieste as soon as I hear from Mr. During that he has procured a live torpedo for my experiments. The first time since my illness, I have found a month pass too quickly here. The weather has been delightful, and I have had shooting enough to make the day short; and my pursuits in natural history respecting the migration of birds, have given me some new and curious results. I must not forget the constant attention and kindness of my “Illyrian maid,” I mean poetically and really. The art of living happy is, I believe, the art of being agreeably deluded; and faith in all things is superior to reason, which, after all, is but a dead weight in advanced life, though as the pendulum to the clock in youth.

I am delighted with your account of the improvement in your health, which I trust will be permanent. I have certainly improved more since I have been here than at any former period of my illness, and I *sometimes forget* my miseries.

Do as you please *about the house*. I have now resolved to winter in Italy, though the *ubi* is still uncertain: for want of a sure address, after I leave this, write to me at Bologna.

Mr. W. T.'s, I dare say, is an agreeable house. Vanity is always an agreeable quality, and is, I think, the most exquisite and odorous essence of selfishness, and almost always connected with good nature, and, when the stomach is right, with good temper.

God bless you, my dear Jane! I am just going to look for quails.

Your affectionate,

H. DAVY.

To the Same.

Rome, November 18, 1828.

My dear Jane—I arrived here this morning. I found snow in the road at Ferrara, but after I passed Pesaro, the weather became Italian. We are here in sunshine. I have walked to the Pincio, and found it too warm. I shall not write much, being a little feverish after my journey.

I am anxious to hear if Murray has received my corrected copy of *Salmonia*; and likewise for many reasons anxious to hear from you.

I saw La Martinetti at Bologna. I think her much altered, and very desponding about the absence of her Russian friend. She was as usual kind and amiable, and I passed an hour in her box at the opera.

I hope I shall find some shooting here, and I trust some literary amusement, in adding to my vision of the Colosseum, otherwise I shall vegetate—for my spirits are too feeble to bear general society, and I fear I shall find no Illyrian nurse here, such as the spirit that dispelled my melancholy at Laybach; but I live always in hope, that I may still be useful to

others, and that my existence is continued for some useful purpose.

God bless you, my dear Jane !

Your most affectionate,

H. DAVY.

To the Same.

Rome, December 8, 1828.

My dear Jane—I begin to be alarmed: it is now nearly two months that I have had no letters. I have little to say. I find here my dear Monsignore the Vice Legate of Ravenna, the most amiable of men, and one of the most enlightened. His society is sunshine to me, and with Morichini, he supplies almost all I want from mankind. We have again bright and beautiful days, and I can pass five or six hours in the Campagna with interest and amusement; but for game there is scarcely any. I bring back two or three quails or snipes from places where, ten years ago, I usually found scores. There is no water in the Campagna.

I am making some experiments on electricity with apparatus they have provided me with from the Sapienza, and I am likewise steadily employed in my literary labours. Pray write to me.

God bless you, my dear Jane !

Your affectionate,

H. DAVY.

To the Same.

Rome, December 18, 1828.

My dear Jane—I have at last received your letters to Bologna, and the one of November 18 from Great Malvern, which is the last, in which you speak of Mrs. Somerville's and Sir Walter's review of Salmonia. I have had no *packets* either

from you or from Murray, and I long exceedingly to read the Poet's praise of the fisherman. I have a letter from my brother, who has received Salmonia, and who sends me Mr. Frere's admiration of the little book.

I continue much as when I wrote last. Your last letter raised my spirits, by giving me the praise of the praiseworthy; but depressed them by the bad accounts of poor Wollaston. He at least has not suffered from indulgence. I cannot help thinking that a certain quantity of nervous or vital power is given to man, which, when consumed, cannot be replaced, and which limits the period of activity and of existence.

I lead the life of a solitary. I go into the Campagna to look for game, and work at home at my dialogues the alternate days. I hope I shall finish something worth publishing before the winter is over.

This day, my birth-day, I finish my half century.¹ Whether the work I am now employed on will be my last, I know not; but I am sure, in one respect, it will be *my best*; for its object is to display and vindicate *the instinct or feeling of religion*. No philosopher, I am sure, *will* quarrel with it, and no Christian *ought* to quarrel with it.

I am, my dear Jane,

Your most affectionate,

H. DAVY.

To the Same.

Rome, January 20, 1829.

My dear Jane—A cabinet courier brought me this morning the parcel containing the papers from Penzance. I have received all my letters. No person can correct the *scienza* part of Salmonia as well as Mr. Blake. Of course I shall be in-

¹ As recorded in the family bible, the 17th of December was his birth-day, as stated in page 1.

finitely obliged to him for his assistance. I wish I could claim his pencil assistance for Denham and Leintwardine. I have already requested you to let the house if you like. I hope I shall live to finish my *Philosophical Dialogues*, but I doubt exceedingly whether I shall ever again inhabit the house in Park Street. I have no despondence; but I feel my vital powers (quoad the body) are not restoring; and my stomach is feebler than ever in this climate. I cannot go into society, for even a conversation of half an hour exhausts me, and my voice is almost inaudible. My mind, however, I hope, has all *its vigour*, and too much discriminating sensibility.

Should I survive the winter, I shall like to return to Illyria, and the Save and the Traun in spring; and shall be most happy to meet you there. You talk of some nymph Bettina. Alas! my Bettinas are with the years of the old Romans, and amongst the ruins of the eternal city, images which cannot return. But if you mean my dear little nurse and friend of Laybach, I shall be very glad to make you acquainted with her. She has made some days of my life more agreeable than I had any reason to expect, and more agreeable than I had any right to hope. Her name is Josephine or Papina.

I am at this moment much interested in an inquiry of science, which has opened itself unexpectedly in the functions of the torpedo; and I regret more than ever the stiffness and weakness of my left hand, which limit my powers of dissection and manipulation.

God bless you, my dear Jane!

Your most affectionate,

H. DAVY.

To the Same.

Rome, February 11, 1829.

My dear Jane—I have just received the packet from Lord Aberdeen. I am grateful to you for the trouble you have

taken, and I beg you will express my warm acknowledgments to his Lordship for the kindness with which he is so good as to promote the objects of a sick, perhaps a dying man. Thank Mr. Murray for his letter to me, and for the book, and tell him I will think upon the matters which he proposes, and say to him that I am much obliged to him for the *Journal of the Naturalist*, which will be particularly interesting to me.¹ I am glad to have received the letter from the Prince of Denmark, and I shall reply to it in a few days. It is delightful to know one is not forgotten by friends, and it is in human nature to be pleased with the recollection of the *heir to a throne*.

This climate does not at all agree with me, though, perhaps, I should suffer in winter everywhere. There is no mode of avoiding cold, and my limbs suffer and become numb whenever the north wind blows, and I have had in addition a severe inflammatory cold, affecting the eyes, head, and chest. I have been obliged to lose blood, and apply blisters, which, in my state of weakness, have been very depressing. I have, however, crawled out in the sun this day, and I hope the crisis of this severe attack is past.

If you have an opportunity of sending again by a messenger through Lord Aberdeen's kindness, address the packet to me to the care of Messrs. Freeborn and Smith, Bankers, Rue Condolli, Rome, to be delivered immediately: if you address to Bologna, to the care of Madame Martinetti. I shall go north about the second week in March. I shall be glad to know that Count Harract, of Vienna, has granted my request to shoot birds of passage in April or May at Laybach, as a naturalist.

* * * * *

You will have heard, before you receive this letter, of the death of the Pope: I do not think he is much regretted.

¹ The proposal of Mr. Murray was to review this work for the Quarterly: £100 was the very liberal offer for the article.

I am glad Warburton is going to write a life of Wollaston;¹ yet I am not sure that Blake could not write a more instructive one; yet Warburton will make it scientific, and I doubt not accurate. It was not worth his while (Wollaston's) to have died so rich; but I suppose there is a pleasure in accumulating. So will W. die! with perhaps two or three hundred thousand; yet these men might have applied money to the noblest purposes. You speak of his malady being a family one. This likewise is my case: my grandfather and six or seven of my great uncles died of apoplexy.

I have finished my six dialogues. The first is the Vision in the Colosseum. I am pleased with them. I think you will find them entertaining. There are some interesting incidents; but I hope to show them to you before spring is over. Pray remember me to all friends who inquire for me, and be sure I am very grateful for any attention and kindness, and I shall be delighted to know you are well and happy. I shall write to Murray as soon as I know my *little* repaired bark is launched.

God bless you, my dear Jane!

Your most affectionate,

H. DAVY.

I have just seen Prince Esterhazy's note: a thousand thanks for it. Pray let him read my opinion of the people of Upper Austria, in Salmonia; and pray have the great kindness to send copies of Salmonia to the Prince and to the Archduke John.

The two next letters will finish this correspondence—one written to Lady Davy, from his dictation, making known his last requests and wishes, and one

¹ The Life of Wollaston, still a desideratum.

from her in reply, the copy of which she preserved, and for which also I am indebted to her relation, Dr. Kerr. I am induced to give it, as confirmatory of a former remark, of her abiding admiration, and I would hope of affectionate regard and tender feeling, which, to use his own expression in relation to her, "had been smothered, not extinguished."

To Lady Davy.

Rome, March 1, 1829.

I am still alive, though expecting every hour to be released. The insidious and unexpected attack has destroyed almost all the powers of my body, but seems to have left every energy, and every refined taste of the mind perfect. As ill health may have prevented you from setting out, I write to you still in London, but I hope you will come to Rome as quickly as you can. I wish my dust to sleep in the city of the Cæsars; but there are some relics which I should wish immediately delivered into your hands, or those of my brother; they are my six Dialogues, my legacy to the philosophical world; they are in five small volumes; and I hope before you arrive, Mr. Tobin will have made a second copy of them. Of these two copies, I wish one to go to England, through a separate and distinct channel, to prevent accidents. I should not take so much interest in these works, did I not believe that they contain truths which cannot be recovered if they are lost, and which I am convinced will be extremely useful both to the moral and intellectual world. I may be mistaken in this point, yet it is the conviction of a man perfectly sane in all the intellectual faculties, and looking into futurity with the prophetic aspirations belonging to the last moments of existence.

I rejoice that the Catholic question is carried. Without having a strong political bias, I have always considered this point as essential to the welfare of England as a great country,

and connected with her glory as a liberal, philosophical, and Christian country.

You will find my horses I should hope fat, and in good keeping here, and I hope you will use them ; at all events, I can recommend the ponies to you as riding horses, and George is now well acquainted with the manner in which they ought to be treated, and is I believe very careful of them. Should you prefer travelling post, the pair of large horses would, I think, be useful to my brother ; and should he return to settle in England, or settle anywhere else as a physician, they may, I think, form a part of his establishment. He will, I hope, be at Rome before you can be there ; and I think it is almost time for him to quit his life of medical adventure in the army. In my arrangements with respect to property, with regard to which I have left you sole executrix (my will is in a brass box at Drummond's), I wish my brother's interests to be specially considered, and whatever I have said with respect to him in my will and codicil, I wish to have interpreted in the most favourable manner. I believe I mentioned it to you in another place, but I am not sure, I wish the interest of £100, that is to say, £4 a year, to be given annually on my birth-day to the scholars at the grammar school at Penzance, provided that the Mayor and Corporation will consent to their having a holiday on that day. I strongly advise you to pay a visit to my friend, Monsignore Spada, at Spoleto. He had prepared an apartment there for me, which I hope my "relicti" will occupy. Pray give him a copy of my second edition of *Salmonia*, and likewise the little gold box in my writing case, sent to me by the Emperor Alexander, and which I think he will use as a snuff-box. He is one of the most amiable and enlightened men I ever knew, and I have no doubt will, at no distant period, be an honour to the conclave.

God bless you, my dearest !

H. DAVY.

From Lady Davy.

I have received, my beloved Sir Humphry, the letter signed by your hand, with its precious wish of tenderness, bearing date the 1st of March. I start to-morrow, having been detained here by Drs. Babington and Clarke, till to-day. I shall travel with all the expedition I can, to arrive not quite useless. I trust still to embrace you, for so clear and beautiful expressions and sentiments cannot be the inhabitants of decay, however of feeble limbs and frame. I shall to the extremest point hold your wishes sacred, and obey in ready willingness the spirit even more than the letter of your order. God still preserve you, and know that the lofty and noble tone of your letter deepens all love and faith I have ever borne to you, and believe the words of kind effort will be a shield to me through life. I cannot add more than that your fame is a deposit, and your memory a glory, your life still a hope.

Your ever faithful and affectionate,

JANE DAVY.

I shall conclude with the insertion of an extract from the address of the President, his successor, Mr. Davies Gilbert, from the chair of the Royal Society, and the addition of two letters, both from the same gentleman, the late Mr. Poole of Nether Stowey, as already remarked, one of my brother's oldest and most attached friends. This extract and these letters relate to different periods of his life; the first to his earliest years, Mr. Gilbert having known him almost from infancy. The latter from the beginning of his public career at Bristol to his last days. Mr. Gilbert's address was on the occasion of the anniversary

meeting of the Society in 1829, held on the 30th of November, when, according to usage, he, the President, had to notice the more distinguished of the Fellows lost to science during the year; and Wollaston and Young also, it is remarkable, were of the number, three who had been associated in their best days as secretaries. The portion extracted is the concluding part, that which followed an abstract of his labours and discoveries. As an estimate of character, I need hardly remark, it is open to question.

Such is the imperfect sketch that I have presumed to give of Sir Humphry Davy, omitting much of importance in his high character of an inventive philosopher, by which he has added to the credit, to the honour, and to the fame of this most distinguished Society, by which he has diffused a lustre on the province which gave him birth, and on the entire nation to which he belonged.

Some short account of so extraordinary a man in his early years, may be expected from the only member of the Society who has witnessed them.

In infancy his mind ran upon romance. He had probably read or heard some tales of chivalry. His ardent wish was to issue forth armed *cap-à-pie*, and to clear the world of giants and monsters. At school, at Penzance, he advanced to eastern tales and legends, so that many contemporaries remember standing round him with delight, whilst he repeated, varied, or invented fiction for their amusement. The gradation from this habit to measured poetry was natural and easy. The grand objects of nature laid hold on his imagination, and we have from his pen, at an age not much further advanced, a poem on St. Michael's "guarded Mount," equal, if not superior to any of the numerous tributes paid to that magnificent pro-

montory, equally interesting to the antiquary, to the geologist, and to the admirer of scenery, at once rugged and sublime.

Painting about the same time became also a favourite amusement, and specimens indicative of no common genius may now be seen at the Royal Institution, where they illustrated his admirable and admired Lectures.

These attempts at painting become doubly and trebly interesting on another account. Some of his contemporaries have expressed to me their belief, that experiments instituted for the purpose of preparing colours, first directed Davy to the pursuit of chemistry. Notwithstanding these various avocations, his advancement in school learning at Truro, under Dr. Cardew, in whose praise as a master too much cannot be expressed, was equal to that of his most able companions; and Davy returned to the house of his benefactor at Penzance, with sufficient acquirements, and with sufficient means derived from his father, for executing his favourite plan of studying at Edinburgh, and there procuring a medical degree. The execution was, however, delayed, by the advice and authority of Mr. Tonkin, who recommended a preparatory medical education at Penzance. It was finally abandoned, I believe, at the Royal Institution.

In a work composed on the bed of sickness, and when all rational hope of a permanent recovery had ceased, the original genius of his youth again burst forth, a spirit which had bestowed on his Lectures an eloquence and an interest to be derived from no other sources. No one can read *Salmonia* without having feelings excited similar to those of the writer; no one reading it, could form any other opinion than that of its author having devoted the whole of his time to the exclusive cultivation of natural history and elegant literature.

The poetic bent of Davy's mind seems never to have left him. To that circumstance I would ascribe the distinguishing feature in his character, and in his discoveries,—a vivid imagination sketching out new tracts in regions unexplored, for

the judgment to select those leading to the recesses of abstract truth.¹

The following two letters from his old and attached friend, Mr. Poole, the first addressed to me, the second to Dr. Paris, are both so expressed, as if specially for the purpose of counteracting the allegations brought against his character by his unfriendly biographer; and on that account chiefly they are here inserted. A great poet and moralist has said—"The affections are their own justification. The light of love in our hearts, is a satisfactory evidence that there is a body of warmth in the minds of our friends whence that light has proceeded."² This is an ennobling and comforting passage, and gives confidence that a friend's and a brother's impressions of a friend and a brother, so far as the affections are concerned, and the moral worth of character, cannot be far wrong, and may be deserving of some credit. And another passage from another great writer may aptly be coupled with the preceding, and should influence relations when so fortunate as to have been connected with men who have deserved well of their country, not to be silent or remiss when a record is required of the illustrious dead: "*Vita enim mortuorum in memoria vivorum est posita.*"³ And a third passage, and from a living writer, that "The greatest men have often many faults, and

¹ From the Journal Book of the Royal Society, vol. xlv., page 536.

² Wordsworth's Essay on Epitaphs.

³ Cicero, Philip. IX.

sometimes their faults are a part of their greatness," may be deserving of consideration, especially of those who, discarding the antiquated doctrine of *de mortuis nil nisi bonum*, adopt the modern one of the contrary kind, that of giving pre-eminence to little faults and failings, and, too often, regardless of truth, even invent them, as if their aim were to lower the character of the distinguished dead, reduce them to the common level, and thereby as much as possible diminish their influence, as exemplars, on their fellow men.

To Dr. Davy.

Nether Stowey, January 27, 1830.

My dear Sir—For I cannot in other terms address you, as the brother of my late dear and illustrious friend, Sir Humphry Davy—I beg you to accept my sincere thanks for the invaluable testimony¹ of his regard which you have transmitted to me, and for your interesting and obliging note accompanying it. I need not say how much I feel honoured by his kind recollection of me, and by his making that feeling known to the world; nor how sensible I am of your attention, by mentioning in the preface the affecting circumstances under which the dedication was written. I received the book last night. I have read it through with great interest; and it will interest, and instruct, and excite to nobler purposes all who read it. It is delightful to see his mind partaking so much of heaven when just on its threshold.

There is another gratification which I have experienced, to which I cannot help alluding; I mean my friend's recollection

¹ A copy of the "Consolations in Travel," dedicated to Mr. Poole "in remembrance of thirty years of continued and faithful friendship."

of me by his will. I have received the legacy from Lady Davy, and have appropriated it to the purchase of his portrait by Howard. It is, I remember, a striking likeness of *what he was* seventeen years ago, and a good painting. I think myself very fortunate in being able to procure it. The picture is now on its way from London, and will be my companion while I live. Its presence will tend to make me wiser and better.

I cannot conclude without expressing a hope, that when any circumstance takes you *to the West*, you will favour me with a visit. I am but eighteen miles of excellent road from Bridgewater; and it will give me great satisfaction to become acquainted with the brother of *the friend* whom I honoured and loved, and whose death, for my own sake and for the sake of mankind, I lament.

I am, &c.,

THOMAS POOLE.

This visit I had the pleasure of paying shortly after; it was my first and last, for his valued life was then drawing nigh to its close. The portrait referred to passed after his death into the possession of his nephew, William Poole King, Esq., of Clifton, having been specially left him as a legacy by his uncle. A copy of it I have, and by the original artist, made after an interval of about thirty years. Mr. Poole was so kind as to send me the picture for the purpose.

To Dr. Paris.

Nether Stowey, February 1, 1830.

Dear Sir—You request me to give you any information in my power which may contribute to the important and interest-

ing work which you have undertaken—the history of the life of my distinguished and lamented friend, the late Sir Humphry Davy.

Although the most friendly intercourse existed between us for thirty years, and occasionally correspondence by letters, I fear I have little else to communicate than to bear testimony to his general intellectual elevation, and to the warmth, sincerity, and simplicity of his heart. I was first introduced to him at the Medical Pneumatic Institution, at Clifton, in, I think, 1799, where I inhaled his nitrous oxide with the usual extraordinary and transitory sensations; but the interesting conversation, manners, and appearance of the youthful operator were not transitory—nay, riveted my attention, and we soon became friends.

From that time to his death, no interruption of the most cordial goodwill and affection occurred between us. Neither the importance of his discoveries, nor the attentions of the exalted in rank or science, whether as individuals or public bodies, nor the honour conferred on him by his sovereign, made the least alteration in his personal demeanour, or in the tone of his correspondence. No man was ever less spoiled by the world. The truth is, though he conformed to the world, and paid due deference to those men and things which are deferred to by the world, his delight was in his intellectual being. He felt that he had the power of investigating the laws of nature beyond that entrusted to the generality of men; and the success with which he acted on this impulse increased his confidence. During his last visit to me in November, 1827, when in a very weak state of health, he more than once said, “I do not wish to live, as far as I am personally concerned, but I have views which I could develop, if it pleased God to save my life, which would be useful to science and mankind.” Indeed, to be useful to science and mankind was that in which he *gloried*, to use a favourite word of his. He was enthusiastically attached to science, and to men of science; and his

heart yearned to be useful to mankind, and particularly to the humblest of mankind. How often have I heard him express the satisfaction which the discovery of the safety lamp gave him ! “ I value it,” he said, “ more than anything I ever did : it was the result of a vast deal of investigation and labour ; but if my directions be attended to, it will save the lives of thousands of poor men. I was never more affected,” he added, “ than by a written address which I received from the working colliers when I was in the north, thanking me on behalf of themselves and their families for the preservation of their lives.”¹ I remember how delighted he was when he showed me a service of plate presented to him by those very men and their employers,² as a testimony of their gratitude.

Such were the motives which excited him to that investigation which led to those various important and brilliant results,

¹ The address referred to above was the following, copied verbatim from the original, now before me :—

“ September 18, 1816.

“ We, the undersigned, miners at the Whitehaven Collieries, belonging to the Earl of Lonsdale, return our sincere thanks to Sir Humphry Davy, for his invaluable discovery of the safe lamps, which are to us life preservers ; and being the only return in our power to make, we most humbly offer this, our tribute of gratitude.”

The names of eighty-two miners are appended ;—the majority of them, viz., forty-seven, with their mark (X) affixed.

² This was a mistake. The service of plate was presented to him by the owners of collieries exclusively on the Tyne and Wear, as is shown by the inscription on the centre piece, of which the following is a copy :—

“ Newcastle-on-Tyne.

“ This service of plate was presented to Sir Humphry Davy by the subscribers, as a token of gratitude for his invaluable discovery of the safety lamp.”

The list of subscribers is underneath : it comprised the owners of thirty-six collieries, and was headed by the Duke of Northumberland. The individual names are to be found in the Memoirs of his Life.

which you are qualified to appreciate, and will, I doubt not, ably detail.

However his circumstances or situation in society altered, his labours and zeal in the pursuit of science were throughout his life undiminished. Not many days before he had that attack of paralysis at Rome, from which he never recovered, he tells me in a letter that he was employed in the investigation of the generation of eels. Natural history in general had been a favourite subject with him throughout his protracted illness, for when he was with me in November, 1827, he paid attention to that subject only; "for," said he, "I am prohibited from applying, and I am incapable of applying, to anything that requires severe attention." During the same visit, I remember his inherent love of the laboratory (if I may so speak) was manifested in a manner which much interested me at the moment. On his visiting with me a gentleman in this neighbourhood who had offered to let him his house, and who has an extensive philosophical apparatus, particularly complete in electricity and chemistry,¹ he was fatigued by the journey; and as we were walking round the house very languidly, a door opened, and we were in the laboratory. He threw his eyes round the room, which brightened in the action—a glow came over his countenance, and he appeared himself twenty years ago. He was surprised and delighted, and seemed to say, "This is the beloved theatre of my glory!" I said, "You are pleased." He shook his head, and smiled. What, from my earliest knowledge of my admirable friend, I considered his most striking characteristic, was the quickness and truth of his apprehension. It was a power of reasoning so rapid, when applied to any subject, that he could hardly himself be conscious of the process; and it must, I think, have been felt by him, as it appeared to me, pure

¹ The late Mr. Crosse's, of which an interesting account will be found in a Memoir of his Life by his widow.

intuition. I used to say to him, "You understand me before I half understand myself!" I recollect on our first acquaintance he knew little of the practice of agriculture. I was at that time a considerable farmer, and very fond of the occupation. During his visits in those days, I was at first something like his teacher in this matter; but my pupil soon became my master, both in theory and practice. No man was less a sectarian (if I may use the word) in religion, in politics, or in science. He regarded with benevolence the sincere convictions of any class on the subject of religion, however they might vary from his own. In politics he was an ardent friend of rational liberty; he gloried in the institutions of his country, and was anxious to see them maintained in their purity, by timely and temperate reform. Men of science, wherever situated, he considered as fellow-subjects of one great republic, spread over the world. I was in London soon after he received the letter from France, announcing that the National Institute had awarded him the prize given by Napoleon to the greatest discovery by means of galvanism. (These discoveries are detailed in the Transactions of the Royal Society, 1807.) He showed me the letter, and said, "Some people say I ought not to have accepted this, and there have been foolish paragraphs in the papers to that effect; but if the two countries or governments are at war, the men of science are not—that would be indeed a *civil war* of the worst sort. Rather," he added, "we should, through the instrumentality of men of science, soften the asperity of national war."

Among my friend's intellectual efforts, his poetical productions are worthy of attention. Some have been published; and I believe there is a large collection in manuscript. If his mind had been given another direction, he probably would have ranked high among our poets. I recollect hearing perhaps the greatest living poetic genius¹ say, "Had not

¹ The late Mr. Coleridge.

Davy been the first chemist, he, probably, would have been the first poet of his age."

As to his amusements, he was latterly a good shot, and an expert angler—a great admirer of old Isaac Walton. He highly prided himself on these accomplishments. I used to laugh at him, which he did not like—not that I underrated them—but it amused me to see such a man give so much importance to these qualifications. He would say, "It is not the sport only (though there is great pleasure in successful dexterity), but it is the ardour of the pursuit; the pure air; the contemplation of a fine country; the exercise; all which invigorate the body, and excite the mind to its best efforts."

He endeavoured at different times to purchase an estate in this neighbourhood, on which he proposed to reside occasionally, "for the sake," he said, "of field sports in a fine country!" These amusements seem to have become more and more important in his estimation as his health declined, and it was affecting to observe the efforts he made to share them as his strength diminished. From being able to walk without fatigue for many hours, he was, when he came to me in November, 1826, obliged to have a pony to take him to the field, from which he dismounted only in the certainty of immediate sport. In the following year he could only take short occasional rides to the covers, with his dogs around him, and his servant walking by his side carrying his gun, but which, I believe, he never fired. During this last visit (November and December, 1827), his bodily infirmity was very great, and his sensibility was painfully alive on every occasion. Unhappily he had to sustain the affliction of the sudden death of Mr. K.,¹ the son of a friend whom he highly valued; and though this afflicting event was, by the considerate attention of Lady Davy, first communicated to me, to be imparted to him with every precaution to avoid his being suddenly shocked, yet it was many days before he could

¹ See p. 296.

resume his usual spirits, feeble as they were, and wonted occupations.

On his arrival, he said, "Here I am, the ruin of what I was!" But, nevertheless, the same activity and ardour of mind continued, though directed to different objects. He employed himself three hours in the morning on his *Salmonia*, which he was then writing. He would then take a short walk (which he accomplished with difficulty) or ride; and after dinner I used to read to him some amusing book. We were much interested, particularly by Southey's "Life of Nelson." "It would give Southey," he said, "great pleasure if he knew how much his narrative affected us." In the evenings, Mr. and Mrs. W. (he had long known W.) frequently came to make a rubber at whist. He was averse to seeing strangers; but on being shown the drawings in natural history of a friend of mine of great talent, Mr. Baker, of Bridgewater, he was anxious to see him, and was much pleased with his company, and suggested to him various matters for investigation concerning fish, particularly the eel. What pleasure it would give him, if he were now alive, to learn the interesting result of these suggestions, which will, I hope, soon be known to the public.

I know not that I can add more to fulfil the object I proposed to myself, which was not to speak of Sir Humphry Davy's discoveries in science, his various literary productions, or his able and upright conduct as a member of public bodies—these are before the public, and evince his greatness—but it was to show that he was not only one of the greatest, but one of the most amiable of men. * * *

I am, dear sir, yours,

THOMAS POOLE.

Other testimonials there are, which I could transcribe, as to his qualities as a man, and a man of

science. It may suffice to refer to the late Dr. Henry's eloquent account of him in the latter capacity, to be found in the preface to the last edition of his *Elements of Chemistry*, contrasting his powers with those of Dr. Wollaston, and to the sketch of his character, not less eloquent, written by one not personally acquainted with him, which appeared in Professor Silliman's "*American Journal of Science and Arts*," shortly after his death.

A few words more. Where he died, there, according to his own wish, expressed in his will, he was buried; a wish preceded by the sentiment—*Natura suas reliquias curat*. He was honoured by a public funeral, and his remains were deposited in the burying-ground without the walls of the city, close to the grave of Professor Pictet. The following inscription is on his tomb:—

Hic jacet

HUMPHRY DAVY,

Eques magnæ Britanniae Baronetus,

Olim Regiæ Societ : Londin : Præses,

Summus Arcanorum Naturæ indagator,

Natus Penzantiæ, Cornubiensium XVII Decemb: MDCCLXXVIII.

Obiit Genevæ Helvetiorum XXIX Mai MDCCCXXIX.

Nor was the "melodious tear" a-wanting.

Thou ! from whose lip the word that freely flowed,
With all a poet's inspiration glowed,
Lamented friend, farewell ! Thou liest at rest,
A world of wonders buried in thy breast !

High aims were thine—all nature to explore,
Make each new truth developed gender more,
And upward traced through universal laws,
Ascend in spirit to the eternal cause :
Such was thy ardent hope, thy view sublime :
But, ah ! cut off in manhood's daring prime,
Thou liest where Genius leans upon thy tomb,
And, half eclipsed, mourns thy untimely doom.¹

¹ From lines suggested by the third meeting of the British Association for the Advancement of Science, held at Cambridge, in June, 1833. By the late W. Sotheby, Esq., F.R.S.

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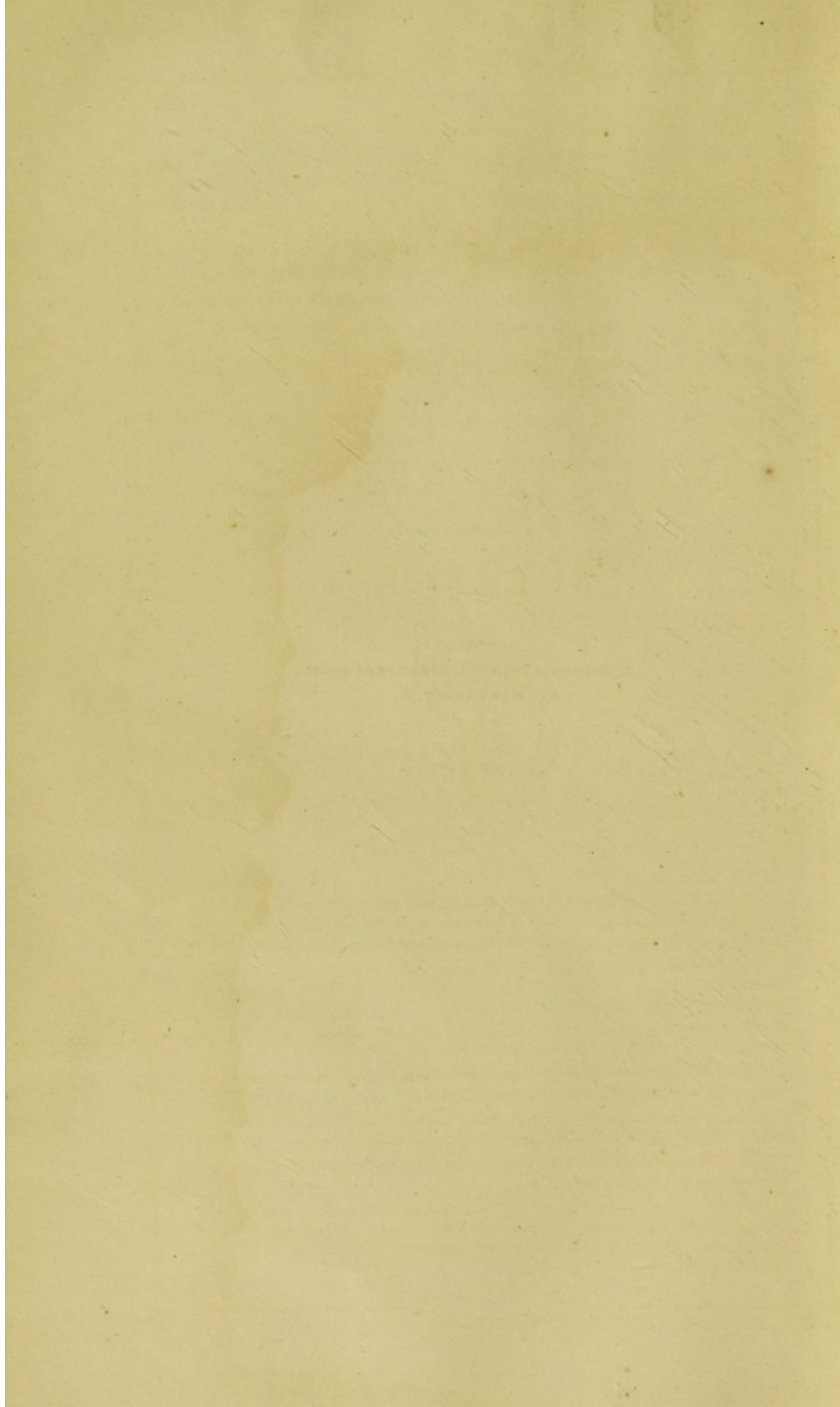
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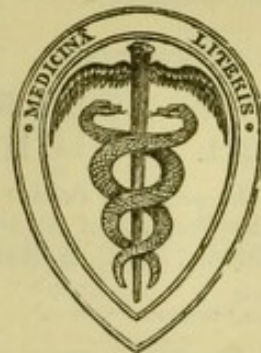
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