

Letter 1651 Darwin to W. D. Fox

19 Mar [1855]

Down Farnborough Kent

March 19th.

My dear Fox

How long it is since we have had any communication & I really want to hear how the world goes with you; but my immediate object is to ask you to observe a point for me, & as I know how you are a very busy man with too much to do, I shall have a good chance of your doing what I want, as it wd be hopeless to ask a quite idle man.—

As you have a noah's ark,^{f1} I do not doubt that you have pigeons; (how I wish by any chance they were fantails!) Now what I want to know is, at what age nestling pigeons have their tail feathers sufficiently developed to be counted. I do not think I ever even saw a young pigeon. I am hard at work on my notes, collating & comparing them, in order in some 2 or 3 years to write a book with all the facts & arguments, which I can collect, *for* & *versus* the immutability of species.—^{f2} I want to get the young of our domestic breeds to see how young, & to what degree, the differences appear. I must either breed myself (which is no amusement, but a horrid bore to me) the pigeons or buy them young, & before I go to a seller whom I have heard of from Yarrell,^{f3} I am really anxious to know something about their development not to expose my excessive ignorance, & therefore be excessively liable to be cheated & gulled— With respect to the *one* point of the tail feathers, it is, of course, in relation to the wonderful development of tail feathers in the adult fan-tail. If you had any breed of Poultry pure, I wd. beg a chicken with exact age stated about a week or fortnight old! to be sent in Box by Post, if cd have the heart to kill one, & secondly wd. let me pay postage. Indeed I shd be very glad to have a nestling common pigeon sent, for I mean to make skeletons, & have already just begun comparing wild & tame ducks,^{f4} & I think the results rather curious, for on weighing the several bones very carefully, when perfectly cleaned, the *proportional* weights of the two have greatly varied; the foot of the tame having largely increased. How I wish I could get a little wild duck of a week old, but that I know is almost impossible.—

With respect to ourselves, I have not much to say: we have just now a terribly noisy house with the Hooping cough:^{f5} but otherwise are all well. Far the greatest fact, about myself is that I have at last quite done with the everlasting Barnacles. At the end of the year we had two of our little Boys very ill with fever & Bronchites & all sorts of ailments.^{f6} Partly for amusement & partly for change of air we went to London & took a House for a month, but it turned out a great failure, for that dreadful frost just set in when we went, & all our children got unwell & Emma & I had coughs, & colds, & rheumatism nearly all the time.^{f7} We had put down first on our list (of things to do) to go & see Mrs. Fox, but literally, after waiting some time to see whether the weather would not improve, we had not a day when we both could go out. I do hope before very long you will be able to manage to pay us a visit: Time is slipping away, & we are getting oldish. Do tell us about yourself & all your large family. I know you will help me, *if you can*, with information about the young pigeons: & anyhow do write before very long.

My dear Fox | Your sincere old friend | C. Darwin

Amongst all sorts of odds & ends, with which I am amusing myself, I am comparing the seeds of the vars. of plants. I had formerly some wild cabbage seeds, which I gave to some one. Was it to you? It is a *thousand* to one that it is thrown away, if not I shd. Be very glad of a pinch of it.—

Footnotes

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f1 A reference to the number and variety of animals Fox kept at Delamere.

f2 CD had told Fox about his views on the transmutation of species in 1838 (see *Correspondence* vol. 2, letter to W. D. Fox, [15 June 1838]).

f3 William Yarrell, a leading authority on British birds. The seller CD refers to was probably John Baily, poulterer and dealer in live birds, 113 Mount Street, Berkeley Square (*Post Office London directory* 1853). Beginning in 1855, CD's Account book (Down House MS) has many entries relating to payments to Baily for pigeons.

f4 See letter to J. D. Hooker, 11 [December 1854].

f5 CD's family Bible (Down House MS), in which the childrens' illnesses were recorded, indicates that all the children except William had 'Hooping cough' in March 1855.

f6 Francis and Leonard Darwin (see 'Journal'; *Correspondence* vol 5, Appendix I).

f7 The Darwins stayed at 27 York Place, Baker Street, from 18 January to 15 February 1855. The *Annual Register* (1855), Chronicle, pp. 23–5, reported that a severe cold spell affected the country in January and February with the Thames in London 'encumbered with large masses of frozen snow or ice' that covered the river at low tide.

Letter 1686 Darwin to W. D. Fox

23 May [1855]

Down Farnborough Kent
May 23d.

My dear Fox

I thank you heartily for the way you take all my requests.

I think I will insert request in Gardeners Chron. about Lizard Eggs;^{f1} it seems cool, however, making such a request to the world at large.— Very many thanks to your Lady friend from Jersey.—

I write now to say that I have been looking at some of our mongrel chickens & I should say *one week old* would do very well. The chief point which I am & have been for years very curious about is to ascertain, whether the *young* of our domestic breeds differ as much from each other as do their parents, & I have no faith in anything short of actual measurement & the Rule of Three.—^{f2} I hope & believe I am not giving so much trouble without a motive of sufficient worth.—

I have got my Fan-tails & Pouters (choice Birds, I hope, as I paid 20s for each pair from Baily) in a grand cage & Pigeon House, & they are a decided amusement to me, & a delight to Etty.^{f3} Both kinds have laid eggs.—

My wife is away from home at Rugby, nursing Willy, who has had your dreadful enemy the Scarlet Fever, rather badly, but yesterday & today's letters make me perfectly easy;^{f4} but I think I shall go in a few days, & relieve guard.— We are in terrible perplexity about contagion, for here *all* the children have the Hooping cough, which Willy has not had.—^{f5}

I am glad to see from your note that you keep up your vivid interest about Birds, & all living things. With so many children & parishioners I feared that you could hardly have had time to care for anything else.

Farewell my dear old friend | Ever yours | C. Darwin

PS | I have sent a communication to the Gardeners' Chronicle on the means of distribution of plants by sea-currents,^{f6} but I expect that it is too long for insertion at least of the whole.—

I had quite forgotten when I wrote to you, that the very common British Lizard is ovoviviparous! & the chance of getting ova of the *L. agilis*, I fear is small. Jersey is evidently the best chance.— I am going to try land-snail shells & their eggs also. in seawater.—

Footnotes

^{f1} See letter to *Gardeners' Chronicle*, [before 26 May 1855].

^{f2} CD described his observations on this point in *Variation* 1: 249–51. The rule of three allows the calculation of an unknown, x , using the formula: a is to b as c is to x .

^{f3} Henrietta Emma Darwin.

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f4 According to Emma Darwin's diary, they heard of William's illness (which began on 18 May) on 20 May and she travelled to Erasmus Alvey Darwin's house in London on that day. On 21 May, she arrived in Rugby and remained there until 28 May.

f5 All the children living at home had had whooping cough in March 1855 (see letter to W. D. Fox, 19 March [1855], n. 5). On 19 June, Emma Darwin recorded in her diary: 'W. came to Sales'. William Sales was a publican and grocer in Down.

f6 Letter to *Gardeners' Chronicle*, 21 May [1855].

Letter 1788 Darwin to W. B. Tegetmeier

[2 Dec 1855]^{f1}

Down Bromley Kent
Sunday Evening.

My dear Sir

I must have the pleasure of thanking you for your very kind reception of me, & *all* the to me really most valuable information, which you gave me. I can assure you it is a long time since I have passed so interesting a morning. But I have, also, an interested motive in writing viz to beg one or two little favours of you; one is to measure for me the length of the upper & lower canine teeth in that very curious skull of the cat: I had intended doing whilst with you, but the amount of interesting talk made me quite forget. I shd like to know the length of the white portion, which was uncovered by the gum, & if the tooth is loose in skull the entire length of the tooth & fang.— What coloured cat was it? & was it very large? All fish come to my net in regard to variation, & I never remember hearing of such a case before. Perhaps your shortest way would be to prick me the length with a pair of compasses, & then I could measure the length carefully to the 1100th of an inch.—^{f2}

After being with you I went and ordered some pigeons & brought home two curious Ducks, the hook-billed & tufted.—

I have been thinking that it will give you as you live in country^{f3} much trouble, to send me the less rare breeds of Fowls, & I could get them by payment at Mr Bakers,^{f4} but not quite such good birds, as I have no doubt I shd. have got from you. But do you think you could aid me in a few of the rarer breeds: would it be asking too great a favour to get you to supplicate the owner of those wonderful black Turkish Fowls at Anerly Show^{f5} to take the trouble to send the cock, or even Hen (shd one die) to me, addressed “to care of Mr Acton Post Office Bromley Kent.”— And likewise is it in your power to get me a *horned* Azores Cock? In the course of a year or two some other rare breeds you might possibly hear of, & it would be of the *greatest* use to me to have the carcasses.—You seem so very goodnatured that I think that you will forgive all the many favours which I have asked.

Believe me with very sincere thanks. My dear Sir | Yours very faithfully | Charles Darwin

When you catch your splendid Victoria Runts, please not forget to look at first flight feather.—

I presume the *fresh* head of Poland was the *white* Poland, & can you remember whether the prepared skull, on which I marked with pencil (H.) to show it was a Hen, & which you gave me, was, also, a White Poland?—^{f6}

I saw & heard so much new to me that my head was quite confused.

Footnotes

^{f1} The first Sunday in December (see endorsement). CD had been to see Tegetmeier on Friday, 23 November (see letter to W. B. Tegetmeier, 16 November [1855]).

^{f2} The case is cited in *Variation* 1: 48, where CD stated: ‘Mr. Tegetmeier has shown me the skull of a female cat with its canines so much developed that they protruded uncovered beyond the lips; the tooth with the fang being .95, and the part projecting from the gum .6 of an inch in length.’

f3 Tegetmeier's address at this time was Wood Green, Tottenham (CD's Address book (Down House MS)).

f4 Samuel C. and Charles N. Baker, dealers in ornamental poultry and live wild-fowl, 3 Half Moon Passage, City and Beaufort St, King's Road, Chelsea (*Post Office London directory* 1851 and CD's Address book).

f5 The poultry show, the largest in England, that was held at Anerley Gardens, near Sydenham, Kent. In 1855, it was held 28–30 August. CD refers to the Ghoondook Turkish fowl, a sub-breed of the Polish fowl (*Variation* 1: 229).

f6 Tegetmeier displayed the skulls of Polish fowl at the 25 November 1856 meeting of the Zoological Society, reported in the *Proceedings* (Tegetmeier 1856). As CD described in *Variation* 1: 266, the breeder, in selecting for a larger crest, 'has unintentionally made the skull protuberant to an astonishing degree; and through correlation of growth, he has at the same time affected ... the internal configuration of the whole skull together with the shape of the brain.' The breed was illustrated in *Variation* 1: 229.

Letter 1794 Darwin to E. L. Layard

9 Dec 1855

Down Bromley Kent
Dec 9th. 1855

Dear Sir

I have read your several communications on the Nat. History of Ceylon with very much interest; & I have thought that the love & zeal shown by you for science, would make you forgive the liberty I take in addressing you; & that perhaps you could give me a little information if your official duties afford you any quite idle time.—[f1](#)

I have during many years been collecting all the facts & reasoning which I could, in regard to the variation & origin of species, intending to give, as far as lies in my power, the many difficulties surrounding the subject on all sides. One chief line of investigation naturally is concerned with the amount of variation of all our domestic animals.

For various reasons, I have determined to work especially on pigeons, poultry, ducks & rabbits; though at the same time I am most grateful for any facts on all our other domesticated quadrupeds & birds. I have been buying all the races of Pigeons, in order to watch them living & make skeletons of them when dead.— I find from various old works, that the Dutch formerly (as now) were great Fanciers, & it has occurred to me that breeds may in former times have been carried to the Cape of Good Hope & may still be retained there; & that these might possibly belong to breeds now lost in Europe, or rare, or even slightly modified.—

Now would you confer the *very great* favour on me to make enquiries for me on this head; & I have thought that you might employ any bird-skinner (if such exist) at my expence, to look out for & skin *old* examples dying a natural death of any breed whatever leaving in the bones of legs & wings, which there is any reason whatever to suppose has long been bred at the Cape. I shd. be extremely glad to get a common Dovehouse Pigeon, if long introduced. I could, I imagine easily repay you for any expence to which you might be put.— It is of course quite possible there may be no Fanciers, but such seem to exist in almost every part of the world; or perhaps you may not have time to spare from more important or interesting employments.— In the same way I shd. be most grateful for any breeds of the domestic Duck; or Poultry if bred at the Cape for many generations; or for any information regarding any Poultry kept by any of the aborigines, but these it would be impossible to get skinned.—

Mr Andersson[f2](#) has promised to draw up for me an account of the several breeds of cattle & dogs kept by the several tribes on the Western coast; if at any time you could aid me in this respect the aid would be very valuable. Very slight differences in some respects are almost as interesting as greater ones in the different breeds. But I fear that I shall have exhausted your patience; & I do not know whether your goodnature will lead you to forgive this intrusion of a brother naturalist, who collected & worked on board H.M.S. Beagle in her voyage round the world.—

Pray believe me, dear Sir, with many apologies, Yours faithfully | Charles Darwin

Can you tell me whether there are any Pigeon Fanciers in Ceylon, as perhaps I could get skins made for me there.—

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I have thought of writing to Mr Thwaites,^{f3} but any hints from you so that I might guide him, would be very useful; but I am well aware that it is a mere chance whether you have ever attended to domestic Pigeons.—^{f4} I have just remembered one other point, on which I shd. be very much obliged for an answer, viz whether you are sure that the *Cyclophorus stemostoma* Sow. & the *Pterocyclus bilabiatus* Sow. are certainly found in Ceylon: I have had a letter from Mr. Benson^{f5} in answer to a query of mine whether any alpine shells were common to the heights of Ceylon, Neilgherries & Himalaya & he speaks somewhat doubtfully on your authority in regard to the two above-named species.

Footnotes

^{f1} Layard had served as a civil servant in Ceylon from 1849 until 1853, during which time he had devoted himself to studying the entomology, ornithology, and conchology of the island. He had published several articles in the *Annals of Natural History* on various aspects of the natural history of Ceylon (E. L. Layard 1851, 1852–3, 1853–4). After returning to England for reasons of health, he had been appointed to the colonial office in Capetown, South Africa, where he also served as the first curator of a museum of natural history. CD wrote to him at the suggestion of Edward Blyth (letter from Edward Blyth, 22–3 August 1855). See also CD's memorandum, [December 1855].

^{f2} Charles John Andersson was a Swedish-born naturalist and collector in South Africa.

^{f3} George Henry Kendrick Thwaites, superintendent of the botanical gardens at Peradeniya, Ceylon, became an important source of information on Ceylon for both *Natural selection* and *Variation*. See the letter to George Henry Kendrick Thwaites, 10 December 1855.

^{f4} Layard's study of the ornithology of South Africa culminated in the publication of *The birds of South Africa* in 1867.

^{f5} William Henry Benson had described Layard's collection of land shells and published a paper on the new species contained in it (Benson 1853). See letter from W. H. Benson, 5 December 1855.

^{f6} Layard probably sent CD's letter to George Grey, then governor of the Cape Colony, to obtain his assistance in providing the information CD sought.

Last ref: 6. Last footnote: 7

Letter 1837 Darwin to G. H. K. Thwaites

8 Mar 1856

Down Bromley Kent
March 8th /56

My dear Sir

Though I have nothing very particular to say I must thank you cordially for the extremely kind manner with which you have received my letter.^{f1} I remember at Oxford that you had attended to many of the points on which I was then & am now so much interested.^{f2} I hope that you will publish some of the facts on variation to which you allude: I shd. be particularly glad to see in print or M.S. some particulars in regard to the species from different elevations, which show different degrees of capacity for cultivation at a new level: Hooker has published a similar case in regard to the Himalaya Rhododendrons.^{f3}

As you have received my letter in so very friendly a spirit, I will mention one or two other points on which I am much interested; viz in regard to the distribution of alpine plants; have you collected at the greater heights in Ceylon, & is there anything new in relation to the vegetation at these heights in comparison with the Himalaya, Neilgherries or other mountains? Again have you observed whether the introduced & *perfectly naturalised* plants tend to vary much in Ceylon? The course of my work makes me more & more sceptical on the eternal immutability of species; yet the difficulties on the other theory of common descent seem to me frightfully great. In my work, which I shall not publish for 2 or 3 or perhaps more years; it is my intention to give, as far as I can & that will be very imperfectly, all the arguments & facts on *both* sides of the case, stating which side seems to me to preponderate.—

You cannot possibly render me more material assistance than by getting me any skins of Indian or Ceylon (or any breed except English) breeds of Pigeons;^{f4} for I have concluded it would be better to work carefully at the varieties of a few animals, than compile brief notices on all our domestic animals. I have now all English breeds of Pigeons alive, & am carefully observing them, making skeletons & crossing them. There are some remarkable Tumblers in India.—^{f5} Have you any domestic Ducks? or Rabbits These I mean to work at, as well as at Poultry. Any skeleton of Ducks wd. be very valuable.— Dr. Kellaart has offered to help me in regard to Poultry, for I met him accidentally at Brit. Museum, after writing to you;^{f6} but I do not know how far he will be so kind as to take trouble for me.—

When I began, I meant merely to thank you; but when a beggar once begins to beg he never knows when to stop!^{f7}

Pray accept my very cordial thanks & good wishes & believe me, My dear Sir | Your's very sincerely |
Ch. Darwin.

Footnotes

^{f1} See *Correspondence* vol. 5, letter to G. H. K. Thwaites, 10 December 1855. Thwaites's reply has not been found.

^{f2} CD had attended the meeting of the British Association for the Advancement of Science in Oxford in 1847 at which Thwaites read a paper announcing his discovery of conjugation in the Diatomaceae (Thwaites 1847).

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f3 Probably J. D. Hooker 1852, pp. 69–71. CD quoted Thwaites's observations on the cultivation of varieties from different elevations in *Natural selection*, p. 286: 'Mr. Thwaites, the curator of the Botanic Garden at Ceylon, ... writes to me, that he finds "that individuals of the same species are acclimatised to different elevations,—being more & more impatient of cultivation at any station, according as they have been transported to it, from stations of greater & greater altitude." ' See also *Correspondence* vol. 7, letter to G. H. K. Thwaites, 7 February [1858].

f4 Thwaites's name is not among those in *Natural selection* or *Variation* who provided CD with specimens of birds or rabbits from Ceylon.

f5 See letter to Walter Elliot, 23 January 1856.

f6 Edward Frederick Kelaart is described in *Variation* 1: 259, where his name is spelled 'Kellaert', as one who had 'closely studied the birds of Ceylon' and is cited on the native fowl of that island (*Variation* 1: 234).

f7 That CD wrote more than he intended is indicated by the fact that the last page was written on the verso of the first. To clarify the order, he headed it 'Last Page'.