science was built upon the microcosm of counties, towns and localized settings containing people whose understanding of the natural world was deeply conditioned by where they lived and worked.

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ANDREW PATTISON, **The Darwins of Shrewsbury**. Stroud: The History Press, 2009. Pp. 127. ISBN 978-0-7524-4867-1. £14.99 (paperback).

MIKE DIXON and GREGORY RADICK, **Darwin in Ilkley**. Stroud: The History Press, 2009. Pp. 126. ISBN 978-0-7524-5283-8. £12.99 (paperback).

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The Darwins of Shrewsbury is by Andrew Pattison, a local historian and editor of the Barnabas Community Church magazine. The book charts the story of the arrival of Charles Darwin's parents and the activities of his immediate family in Shrewsbury between the 1780s and 1880s. The book is mostly focused on Darwin's father, Dr Robert Darwin (1766–1848). Robert arrived in Shrewsbury in 1786 to set up his medical practice. Contrary to popular legend, he received more than twenty pounds to get started in his profession from his illustrious father, the poet and physician Erasmus Darwin. In 1796 Robert married Susannah Wedgwood. The Wedgwoods are also described in a new light. Robert and Susannah set up house at the Crescent, Shrewsbury, before moving into the Mount in 1799. Abundant new information on their domestic establishment is provided. Pattison also gives much previously unpublished detail on Robert's treatment of his patients, involvement with the Salop Infirmary and financial affairs. One recollection of Robert suggests that he believed in phrenology. Several writers have assumed that Robert believed in phrenology because he remarked that the shape of his son's head was quite altered after he returned from the *Beagle* voyage. As a historian of phrenology this has never struck me as evidence for belief in phrenology. However, Pattison's discovery may make a future reinterpretation necessary. In his autobiography Darwin recollected many stories about his father. Pattison provides an interesting alternative version of a story of Robert and a rumoured bank withdrawal. Darwin's siblings also receive more attention than readers will recognize from biographies of Darwin. Pattison's account of father and son is certainly one of the most reasonable and sympathetic accounts ever published. It also overturns (again) the old view that Robert was a tyrant or overly harsh on his sons. (These views were encouraged by the portions of the autobiography on Robert omitted from *Life and Letters* (1887)). There is not much history of science in this book and historians will object to some of the interpolations about the 'minds' of historical figures, for example in the supposed reasons for the dates of baptism of the Darwin children. There are also a very few factual inaccuracies, such as the assertion that Darwin 'continued to doubt if his work on "the species problem" would stand up to professional and public scrutiny' (p. 99). There is no evidence of any such doubts. Future studies of Darwin's life which cover Shrewsbury or the Darwin family will undoubtedly profit from Pattison's book.

Darwin in Ilkley is by Mike Dixon, emeritus professor of gastrointestinal pathology at the University of Leeds, and Gregory Radick, professor in history and philosophy of science at the University of Leeds. Dixon is also an avid local historian with a particular interest in Victorian hydropathy. Both are Ilkley residents. Darwin biographies, understandably, have paid little attention to the two months Darwin attended the water cure establishment in Ilkley from early October to early December 1859, precisely the time when the *Origin of Species* was published and Darwin received the first responses.

A major part of the book revisits the mystery of Darwin's illness(es). Earlier theories, such as Chagas disease, are critically surveyed. Psychosomatic theories, so favoured by scholars from the humanities, perhaps because they put causes from their domain in the driver's seat,

are finally dispatched. They also reject Ralph Colp's interpretation (cited as gospel by some) that Darwin's term 'flatulence' could not refer to passing wind. A further refreshing point is the rejection of the theory that stress over a feared publication or reception of the *Origin of species* made Darwin ill. Indeed it is hard to see how this view could be maintained given the abundance of explicit remarks by Darwin that it was the work of completing the volume that made him tired and ill. When considering the sea-sickness theory of Darwin's illness the authors mistakenly refer to Darwin at sea for a five-year period. Kees Rookmaaker has calculated in his *Chronological Register to Charles Darwin's Notebooks from the Voyage of the Beagle* (2009) that Darwin spent only 33.3 per cent of the voyage at sea. The authors argue that the lactose-intolerance theory to explain Darwin's illness is the most probable.

The authors incorrectly suggest that when Charles Lyell's *Principles of Geology* (1830–1833) appeared, geologists still believed in the Noachian Flood (p. 26). On page 36 we read that 'Darwin began to suspect that his children were affected by "the worst of my bugbears, hereditary weakness" as a result of his marriage to Emma'. Yet this and all of the other statements about Darwin's fears for his children's' infirmity refer to acquiring *his* weak constitution, never to worry about the consequences of marrying his cousin.

Darwin's correspondence during his time at Ilkley is closely analysed, in particular a debate with Lyell about the origins of the races of domesticated dogs. The authors several times associate the debate about races of dogs with human races and slavery – such as: 'Darwin was at that moment deep in debate with Lyell on the origin of domesticated dogs and whether Darwin's advocacy of multiple wild ancestors contradicted his general theory, and the anti-slavery politics that went with it' (p. 99). Any relation with anti-slavery politics here seems added by the authors. There is no relation between Darwin's views on dog races and human races. Darwin argued that 'our dogs are descended from wolves, jackals, South American Canidæ, and other species' (*Variation*, vol. 1, p. 30, see also *Descent*, vol. 1, Chapter 1). The reasons Darwin believed this for dogs (and cats), but that pigeons (and races of many other species) were derived from a single ancestor depended on differences between these groups of animals. Darwin pointed out that there were many wild canid candidates for domestication in different parts of the world. Regional races of dog were believed to resemble regional wild species. It seemed likely to Darwin that these had been independently domesticated. Whereas with pigeons there was only one wild candidate species. The diversity of dog races is vastly greater than that between human races, and there were no multiple ancestor candidates for humans. Indeed it is unclear why a supposed devotion to showing human races descended from a common stock (a minor point for Darwin as it was widely accepted already) should oblige him to see all other biological races as directly descended. Instead Darwin argued that there are a number of historical processes of descent with modification that resulted in the diversity of current inhabitants of the globe.

Darwin in Ilkley also provides further refutation of Darwin as 'the cringing recluse of legend', revealing him instead 'as warm, convivial and socially and intellectually confident' (p. 8). The authors add yet more examples to the already long list of persons known to have heard about Darwin's belief in evolution before publication. These examples show evolution discussed openly and light-heartedly, contradicting the former view of a dangerous secret. The story would have been enriched by the 1863 letter to Darwin from J.J. Aubertin.

Both works are lavishly illustrated and I highly recommend them.

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