

Bugs and the Victorians

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According to the American humorist Ogden Nash, ‘God, in his wisdom, made the Fly. And then forgot to tell us why’. This long-standing mystery has apparently been resolved by John F. McDiarmid Clark, who argues that the fly’s main purpose was to allow early Victorian amateur bug-hunters to become 20th-century professional entomologists. In this engaging and readable book, Clark analyses flies, moths, bees, wasps, ants and the people who studied them, tracing the myriad uses to which insects were put during the Victorian period.

For the Reverend William Kirby and his collaborator William Spence, whose *Introduction to Entomology* (1815–26) went through numerous editions throughout the 19th century, insects were evidence of God’s beneficence, their unique and vital roles giving humanity a glimpse of the intricate and harmonious design that allowed us to make sense of our place in the universe. Both men were similarly devoted to the usefulness of studying insects as an aspect of agricultural improvement – through such means as the promotion of more ‘rational’ honey production through the building of more productive bee-hives. However, they disagreed on the vexed question of animal instinct and intelligence, with Kirby being forced to acknowledge that although the *Introduction* was their joint work, the chapters on instinct were Spence’s alone. When Kirby produced his Bridgewater Treatise, *On the Power and Wisdom of God as manifested in the Creation of Animals and in their History, Habits and Instincts* (1835), he regretfully announced his decision to ‘take the field’ against his ‘worthy friend and learned coadjutor’. Spence believed that instincts could be explained naturalistically, using scientific facts shorn of theological significance (a view that Darwin endorsed when citing Spence’s work in the manuscript of his ‘big species book’). By contrast, the Reverend Kirby asserted that instincts could only be understood as evidence of God’s immanence, his direct intervention in creation. As Clark explains, Kirby’s attachment to a form of natural theology, physico-

theology, that had been more popular in the previous century led to his Treatise being ridiculed by some reviewers. But Kirby understood that naturalistic explanations, even those that acknowledged as the ultimate First Cause of nature's laws, were the first step on a slippery slope that led from denying miracles to deism and ultimately to atheism. As a result, those who shared Kirby's view rejected Newtonianism, since its invocation of unexplained forces effectively denied God a 'hands on' role in his own creation. Clark's discussion of the two founders of Victorian entomology immediately fractures the old idea that every 19th-century British naturalist shared a common, natural theological context.

However, while Clark's argument is superbly researched and argued, some readers may find his explanation of Kirby and Spence's differences rather one-dimensional: 'Spence's work in political economy convinced him of the importance of a science founded on facts and devoid of religious references. In contrast, William Kirby was a Tory High Church clergyman, who structured his science around his Christian Faith in revelation' (p. 38). This contrast undoubtedly captures one aspect of the two men's differences, but nevertheless seems unduly reductive. Explanations of the form that 'X was a member of group Y, and therefore believed Z' seem to deny the possibility that multiple, perhaps mutually contradictory, motivations often seem to be a necessary part of explaining human actions. Moreover, there seems to be an unspoken assumption in such explanations that ideology, religious or political, is in some sense prior to and thus determining of scientific practice; surely the opposite conclusion ought at least to be considered?

In the case of Spence and Kirby, fascinating and original research is very slightly marred by the wider historiographical framework within which it is placed; a pattern that is rather characteristic of the whole book. For example, when Clark turns to the example of Charles Darwin's neighbour, the banker and MP John Lubbock (to whom the British owe the blessed institution of bank holidays), the chapter is called 'Social Insects and Secular Science', because Lubbock is – not unreasonably – located within the X-Club and the 'professionalising' movement around Thomas Henry Huxley. However, by pigeonholing Lubbock in this way, Clark minimises the complex diversity of his science.

It has long been argued by historians of science (myself included, although more distinguished scholars have also done so), that one problem with the long-established 'professionalization' narrative of 19th-century science is its teleology, the tacit assumption that the eventual shape of scientific careers was a goal consciously pursued by the men of science. One key source of this misreading, I suspect, is the conflating of Thomas Huxley's interests with those of the scientific community as whole. In many ways, men like Lubbock, whose substantial fortune allowed him to pursue a variety of scientific interests without any thought of payment, conformed more closely to a Victorian ideal of the man of science than Huxley did. (One effect of recognising this is that it helps us see Darwin as less exceptional than he is sometimes made out to be; he may have been a member of one of the final generations of gentlemanly naturalists, but he was hardly the last of them.)

Even those who did need to earn their bread by scientific work, like Huxley's friend the botanist Joseph Hooker, were at pains to do so in a gentlemanly way, and attempted whenever possible to emulate the disinterested and polite manners of real gentlemen like Lubbock and Darwin. One symptom of this concern with respectability was that the elite practitioners of a science tended to refer to themselves as 'philosophical' naturalists, botanists or -entomologists (Clark cites several examples of the latter usage), rather than as *professional* ones. 'Philosophical' associated practitioners of the natural historical sciences with the more prestigious sciences that had descended from natural philosophy (such as physics), but the term had the additional advantage of classifying people according to the quality of their work, not by how (or if) they earned their living.

The potential for conflict between the desire to be a paid naturalist and that of being an elite one is exemplified in Clark's excellent account of the career of Eleanor Ormerod, one of Victorian Britain's most distinguished women of science. As he notes, the tension that beset her career was that Ormerod wanted to be taken as seriously as any male naturalist, yet did not wish (nor did she need) to take paid employment, which would compromise her genteel status: 'as a member of the landed gentry, she realized that receipt of money would taint her work' (p. 169). As Clark shows, Ormerod suffered particular difficulties because she

was a woman in an almost exclusively male world, nevertheless, she had more in common with men like Lubbock and Hooker than Clark seems to realise.

Ever since the founding of the Royal Society in the 17th century, Britain's leading men of science had made of virtue of necessity by scorning payment for their work (a tradition that had its origins in the simple fact that their first Royal patron, Charles II, didn't have any money to give them). 200 years later, the ideal man of science was still someone like Sir Joseph Banks, wealthy enough to pursue knowledge with no thought of personal reward. Lubbock and Darwin could afford to conform to this ideal, as could Ormerod, while men like Hooker often had to pretend they could afford to, for example, by using the term 'philosophical' to blur the boundaries between paid and unpaid practitioners. By contrast, men like Huxley or Alfred Russel Wallace (both of whom came from much more humble backgrounds, and never imagined a life free from the necessity of working for pay) were less squeamish about accepting a salary. Yet, as Clark notes, Huxley nevertheless scorned 'experts' as being worse than the aristocratic dilettantes he had set out to banish from British science; Huxley's scorn for those who were succeeding in precisely the terms he had made possible is a mark of how pervasive the complex ideal of gentlemanly science remained, and how much it complicates the conventional tale of 'professionalization'.

Yet, like many other writers on this topic, Clark assumes that Lubbock shared the goals of Huxley's campaign for paid, meritocratic scientific careers and so describes him as part of the 'circle of scientists who coalesced around their support for Darwinism' in order to 'launched unified campaigns in favour of secularized science' (p. 83). And as a result Lubbock presented 'the results of his experiments in an accessible, secularized language' (p. 97). There is a lot to agree with in Clark's account, but if it were the whole story, it would become all-but-impossible to explain why Lubbock (in his essay 'On the objects of a collection of insects', 1856), argued that one of the uses of entomology is to promote 'the contemplation of the universal beneficence of the Creator even towards the smallest of his creatures'? Perhaps this simply reflects Lubbock's pre-Darwinian views (although Clark adduces no evidence that Lubbock underwent a radical change of heart post-1859), or perhaps it was simply a sop to the conventional piety of many readers of the *Entomologist's Annual*, where the essay appeared. However, Clark neither quotes nor discusses Lubbock's language, nor does he attempt to integrate either Lubbock's diverse interests (in human prehistory as much as entomology), nor his roles (as a banker, an MP, an elite man of science, but also a popular author). Clark concludes that the range of Lubbock's interests left him 'lost in a no-man's-land between laboratory and field naturalist science'. I would argue that far from being stranded between the worlds of what would eventually emerge as 'professional' and 'amateur' science, Lubbock's life epitomises the delicate and protracted negotiations through which these spheres eventually became separate. Lubbock's use of conventional natural theological language (like Darwin's in the *Origin of Species*), was a mark of the writer's respectability, a product of the same impulse that led the privately agnostic Hooker to agree to publicly stand as godfather to his equally (but less privately) agnostic friend Huxley's son. The complexities of remaining respectable were one aspect of a much wider debate over who was to be considered a gentleman in Victorian England, a question that became vexed because of the vast range of rapid changes that transformed the country during the old queen's long rule, changes that undermined many long-standing sources of authority and trust, thus leaving newly prominent groups like the men of science competing to replace them.

By the end of Victoria's reign, the medical and agricultural needs of empire had allowed entomologists to carve out clear professional roles for themselves as paid experts, trained at recognised institutions and equipped with the PhDs and insecticides they needed to further Joseph Chamberlain's policy of 'constructive imperialism'. Yet, it seems unreasonable to assume that the entomologists' ability to take advantage of the new opportunities implies that they were happy with the jobs they ended up doing, much less that they and their predecessors had always hoped for such jobs.

Clark's book is a delightful read, illuminating many important individuals and their work, and bringing a diverse range of insects and entomologists into much-needed focus. It raises important questions and my disagreements with some aspects of its argument are a mark of how thought-provoking I found it. Anyone with an interest in Victorian science and its impact on everything from the popular imagination to imperial

policy will find *Bugs and the Victorians* an invaluable addition to their libraries.

Other reviews:

The Guardian

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