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Edward Linley Samborne, *MAN IS BUT A WORM* (1881). *Punch*, printed 6 December 1881 for *Punch Almanack*, 1882. Image Album / British Library.

UNFREEZING TIME

Patricia Fara*

Charles Darwin spent decades gathering material for his last book, yet he approached his publisher John Murray with some diffidence. 'I fear the subject of it will not attract the public,' he said, as he handed over his manuscript. He was wrong: despite its unprepossessing title – *The Formation of Vegetable Mould Through the Action of Worms* – 3500 copies were sold almost immediately, and the reviews were overwhelmingly positive. Before long Darwin was complaining of being 'driven almost frantic by the number of letters about worms.'

A few weeks later, Linley Sambourne – one of Punch's top artists – sent Darwin this affectionate yet ambiguous caricature. Sitting aloof and god-like as various creatures spiral around him, the elderly naturalist contemplates a grotesque chronological parody of life's

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history. At the bottom left, worms emerge from chaos, followed by a succession of primates arranged in a progressive march and culminating with an elegant Victorian gentleman who doffs his hat to the theory's creator. 'Man is but a worm,' reads the caption, a reminder of Hamlet's circular metaphor (Act IV, scene 3): 'A man may fish with the worm that hath eat of a king, and eat of the fish that hath fed of that worm.'

Pushed to explain himself, Hamlet comments that 'a king may go a progress through the guts of a beggar.' And that was the major theme of Darwin's analysis. Obsessed with the deficiencies of his own alimentary tract, he became fascinated by the intestines of worms, presenting them as digestive machines, nature's own industrious ploughmen who repeatedly replenish the surface soil by passing it through their bodies. Characteristically, he provided example after example to demonstrate that over the millennia, their perpetual activity has not only created smooth turf-covered landscapes but also protected ancient ruins by burying them in excreted castings.

In addition, for Darwin and his supporters, worms were theoretically significant because they encapsulated the mechanisms of evolutionary development. Although his book was ostensibly a minutely observed study of lowly underground animals, it was also intended to silence critics by affirming the controversial theory of natural selection. Although each individual worm had only a minuscule effect, collectively they produced an immense impact. Labouring incessantly, every year thousands of them churned over multiple tons of earth in every acre.

As Darwin pointed out in the preface, this cumulative effect corroborated claims about recurrent causes acting over long periods at a glacially slow rate. In his cleverly constructed drawing, Samborne has reinforced that inherent message. A small dial, its pointer in the one o'clock position, is labelled 'Thousands of Centuries', while the outer circle, inscribed 'Time's Meter', is designed to look like the rim of a clock face and embraces the anthropoid predecessors of modern *Homo sapiens*.

Worms also vindicated Darwin's insistence on animal intelligence and emotions. Although he conceded that there was no precise definition of intelligence, he argued that detecting rudimentary traces in such primitive animals would reinforce his notion of continuous incremental transformations. Aiming to elucidate what it feels like to be an earthworm, he showed that they too can act with forethought and display preferences.

During the last years of Darwin's life, the family billiard room accommodated numerous glass-sided pots filled with earth and worms from the garden. Recruiting his son Francis as research assistant, Darwin would suddenly shine a lamp or make noises to see how their captives reacted. Although recoiling from intense light, they were apparently immune to low bassoons, high whistles and heat radiated from a red-hot poker. Worms did, however, react to vibrations, a discovery made by arranging their pots on top of his wife's piano – and although indifferent to tobacco fumes, they responded enthusiastically to the smell of cabbage or onions, as if they enjoyed the pleasures of eating.

Aware that his own life was drawing to a close, Darwin concluded his career by studying a creature that was symbolically humble yet scientifically illuminating. Samborne's image recalls the closed circle of Darwin's own intellectual interests, which began and ended with geology. Only four months after 'Man is but a Worm' appeared in *Punch*, Darwin died, believing that he was destined to be buried among friendly worms in the local church yard. Instead, against the family's wishes, he was interred in Westminster Abbey.

Main Sources and Further Reading

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