

[Review] Marcus Byrne and Helen Lunn. *Dance of the Dung Beetles: Their Role in Our Changing World*. Johannesburg: Wits University Press, 2019. 228 pp.

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The very title suggests that this is not a conventional entomological study but a delving into nature-culture entanglements and inextricabilities. Byrne has studied dung beetles for over thirty years; Lunn has a PhD in Musicology but has worked across academic and popular genres. This volume alerts readers to their insect blindness, enchants them with stories of dung beetles in myth and metaphor as well as informing them of the materiality of dung beetles who live on every continent except for Antarctic and Greenland. Insects tend to be vilified as vectors of disease, as indicative of horror or madness, but these dung beetles are made to shift such entrenched perceptions.

What other beetle can claim to have featured so prolifically in human culture? In ancient Egyptian mythology, dung beetles were connected with death, rebirth and resurrection. (As a child I was entranced by the mythological scarabs on my mother's heavy pewter bangle, purchased in Cairo in the early 1940s.) In Christian mythology, contradictorily, they were associated with sin and human weakness as well as being emblematic of Christ – 'his own good beetle' (28) in St Augustine's words, because he had been born out of the same 'filth' as humans. Perhaps what makes dung beetles so fascinating is that they work with faeces – animals' and humans' and then create dung balls – to tantalise females, as food for larvae hatching in the ball until they emerge into the sunlight. The dance is one of orientation on top of their artefacts.

Byrne and Lunn open up the history of natural science via the influence of dung beetles. Early naturalists were conflicted between religion and science, yet during the seventeenth century microscopes linked discoveries of insects with discoveries of new worlds and new

continents. We hear about eccentric, mostly gentlemanly, entomologists (only those with money could afford to collect and study) as the British Empire grew. The ‘dung beetle roll of honour’ (71) included aficionados, Charles Darwin and Jean-Henri Fabre. If dung beetles no longer functioned symbolically, they functioned metonymically: collecting dung beetles elicited different theories, rivalries, the difficulties of housing collections, and the old binarism between science and religion. Byrne and Lunn present experiments and endeavours as narratives of suspense: will dung beetles, who, because of their complexities, are not good candidates for introduction into new locales, transplant successfully and usefully? Happily, dung beetles have flourished and excelled themselves in Hawai’i and parts of Australia; both African and European dung beetles almost eradicated the bush fly in certain parts of Australia and also had a remarkably beneficial effect on the health of the soil in both Australia and New Zealand.

The chapter on ‘Elephants and Dung Beetles’ alerts the reader to the immense power of insects to shift colonial histories through disease. The notorious rinderpest, which destroyed so many domestic cattle and so many ‘wild’ ungulates in southern Africa in the late nineteenth century, was followed by tsetse fly infestations. Grazing lands were no longer suitable for domestic cattle but spaces became available (in colonial logic) for reserves and large parks. The concept of wildlife parks perpetuated the colonial myth of an African Eden with the focus on larger animals while discounting smaller creatures like dung beetles. Yet, as we are made to realise, the work of dung beetles is central. The celebrated annual 25,000 km migration of 1.3 million wildebeest through Serengeti and Mara is not an ecological disaster because dung beetles recycle the dung of all these animals and aerate and fertilise the soil. The reader (or this one at any rate) is roused from her insect blindness by such descriptions of dung beetle communities and habitats. Their lack of well-being is a key indicator in habitat degradation and what, ominously, it may signify.

Byrne and Lunn quote from the first South African novel, *The Story of an African Farm* by Olive Schreiner published in 1883. Doss, the yellow dog, who accompanies the children, Waldo, Lyndall and Em as they climb the dry koppie (flat-topped hill), dismembers a dung beetle. Another heads-up for a reader who always noted the beetle as a symbol of the precarity of life: a ‘striving and a striving and an ending in nothing’ (qtd 122) but failed to notice that Doss’s victim was a dung beetle. If Schreiner’s narrator takes us into the dog’s point of view,

Byrne and Lunn ask us to see events through the point of view of beetles: thus, the introduction of DDT was a ‘dismal time’ (103) for insects.

The chapter ‘Tribes with Human attributes’ is humorously and shamelessly anthropomorphic. Similarities between the sexual behaviour of humans and insects may be justified (154) as we have, basically, the same genes but the occasional arch comments can be distracting. Scientific experiments are rendered entertaining: dung beetles are shown to navigate via ‘celestial cues’ (passim); canny, less-endowed males fool the large-horned beetles guarding their females by digging side-tunnels. Trans-species affection for the experimenters’ ‘endearing’ subjects, who are ‘beloved’ (150) and ‘indomitable little friends’ (153) is confirmed by the beetles’ exclusive focus on the task of moving dung. Optimal for experiments, they are unaffected by human observation and obstacles; they perform in caps or with shoes, with their eyes painted out, or tested with lights. Yet, reassuringly, there is a limit to the discomfort a beetle might be put through – dung beetle scientists have balked at mutilating their subjects’ legs in order to test insect orientations. Science itself is shown to be fallible, even fabulous. How did dung beetles get to Madagascar only 40 million years ago if the island split from the mainland 160 million years ago? One possible answer, redolent of the imaginary floating islands in Yann Martel’s *Life of Pi*, is ‘plant rafts’, which transport entirely random flora and fauna in ‘chance events’ (173).

*Dance of the Dung Beetles* not only shifts the reader’s perceptions towards the well-being and lived experience of these beetles but also shows what huge effects such small creatures can have ecologically. Together with termites and earthworms, dung beetles perform ‘ecosystem services’ (178) as they transform the earth – improving soil health, recycling nutrients and fostering water percolation. As Byrne and Lunn point out, without dung beetles humans might not be here at all. Their reduction and recycling of both human and animal waste along with minimising the accompanying diseases permitted human life on earth to flourish. Reason enough to take notice of dung beetles specifically and insects generally for the future of the planet.