Jean-Marc Drouin. *A Philosophy of the Insect*. Trans. Anne Trager. Columbia University Press 2019. 240 pp. \$85.00 USD (Hardcover ISBN 9780231175784); \$28.00 USD (Paperback ISBN 9780231175791).

The title of this erudite and fascinating volume is a bit misleading, at least to the Anglophone ear. *A Philosophy of the Insect* does not put forward a philosophical argument (or set of arguments) and defend it (them) in a systematic way. I would wager that during the writing/editing/publishing process somebody pointed this out, and an alternative, more accurately descriptive title was considered, but ultimately rejected. This is too bad. An alternative, perhaps, along the lines of *A History of Ideas Concerning Insects*, could be concocted that would retain some of the poetic ring the author and his publishers are surely looking for while also minimizing reader confusion. Granted, a sufficiently precise one, of the kind favored by Anglophone philosophers—say, *A History of Ideas Concerning Insects, Organized Thematically Rather than Chronologically and Focusing Almost Exclusively on European Thinkers*—would be taking things too far.

'A Philosophy of the Insect is not a philosophy of insects,' explains Jean-Marc Drouin. 'It is 'of the insect' in the same way it is customary to speak of a philosophy 'of the law' or 'of art,' 'of science' or 'of nature.' It conveys the conviction that the philosopher cannot think about life without including insects' (5). Again, this is not how the phrase 'a philosophy of ...' is commonly used in the philosophy departments I frequent. Certainly the many topics Drouin covers in this brief book are philosophical in the original sense of the term—the love of wisdom, the quest for knowledge but only the very last chapter engages directly with debates relevant to current academic philosophy. Nevertheless, Drouin aims to persuade that each section should be of interest to the philosopher. In this he is not always successful.

Take the first chapter, in which he explores the size of insects. Instead of getting to the point which in this book essentially involves dazzling readers with little-known facts about insects while exploring how scientific understanding of these facts has evolved in the West over time—Drouin offers an unnecessary prologue on the role of size in a handful of literary works. The reader, for example, is encouraged to mull on the not-as-mysterious-as-Drouin-seems-to-think idea (from *Alice in Wonderland*) that '[t]he nature of big and small seems so relative that the same character can successively shrink or grow in size' (10), before getting to the good stuff: an extended discussion of the popular, yet misguided, temptation to imagine what insect behaviors and capacities would be like were they as large as, or larger than, us. If a flea, say, 'can jump 10 centimeters high and more than 30 centimeters in distance' then a man-sized flea would presumably be able 'to clear the high-jump bar at about 100 meters' and 'measure about 300 meters' on the long jump (11). But this, Drouin explains, is nonsense. Such thought experiments ignore 'that these size rations involve changes of scale.' As the size of the flea increases, so would its weight and many other of its physical attributes: 'In the end, it is useless to lend our size to fleas and grasshoppers, as it would not allow them to jump any higher' (12).

Although he embraces 'how precious the world of insects is' for offering 'the possibility of forging fictions' and 'a multitude of thought experiments' (20), Drouin is at his best as a sober and astoundingly knowledgeable disabuser of fancies. He patiently debunks the claim that the perfect hexagonal regularity of beehives offers 'an argument in favor of the existence of a God creator' (93) by outlining the influence of gravity on solid geometrical shapes and, not too surprisingly, appealing to the much more straightforward explanation for bee behavior offered by Charles Darwin. He

delivers a likewise devastating counter to the theory that insect societies like ants and termites constitute superorganisms in which the brain 'is the whole society' and 'workers are roughly analogous to the nerve cells' (103) by introducing the reader to the concept of 'stigmery,' which 'combines the individual character of the insects with the appearance of coordination' (104). He even stands fearlessly in opposition to the great taxonomist of the natural world, Swedish biologist Carl Linnaeus, who maintained that 'insects are necessarily useful' but 'of a utility that must be discovered, ensuring the utility of the naturalist' (122).

The book's organization is strange. Drouin waits until the second chapter to clarify how insects are defined by modern science—'animals with an external skeleton, having a head, a thorax, and an abdomen, three pairs of legs, two pairs of wings (possibly atrophied or missing), and a pair of antennae' (30)—and to point out that, though insects are creatures 'of nature,' we should always remember that they are 'perceived through the filter of culture' (40). No doubt this is a philosophical claim-did you know that Aristotle refused to believe stinging bees are female because he was convinced 'Nature does not assign defensive weapons to any female creature'? (64)-but one that could have been better used in the introduction, to help guide the reader into the sea of references to arcane treatises that constitute the bulk of the text, ideally accompanied by this exquisite aphorism: 'in the bestiary of metaphysics, insects are auxiliaries of theologians, just as monkeys are allies of free thinkers' (143). A short discussion on the importance of a 'participatory science' in which amateurs work side by side with professionals (59) appears all of a sudden, at the very end of (and completely unconnected to) a chapter on the development of the modern science of entomology. The chapters in general sport headings vague enough that Drouin allows himself, for instance, to skip merrily from sections on mimicry and camouflage among insects to a short history of the use of fruit flies in genetic research to the impact of sociobiology on evolutionary theory (all in chapter 6).

This is true also of the last, most conventionally philosophical chapter, titled 'Worlds and Environments,' which weaves a narrative beginning with the eighteenth-century controversy on whether there is a single 'organizational plan' in nature ('whether a vertebrate and an invertebrate—hence, a man and an insect—are built from the same plan') (144-145), explores the influence of the 'Baltic-German biologist born in Estonia, Baron Jakob von Uexküll' on the phenomenology of Edmund Husserl, Martin Heidegger, and Maurice Merleau-Ponty (148-150), and ends on a plea to take the plight of insects seriously when debating animal rights (151-156).

But if the parts do not always fit together seamlessly, there is hardly one that fails to deliver an intriguing anecdote or tidbit. Who knew that the French government once halted construction of a motorway project for fear of disrupting the 'Coleoptera larvae of *Osmoderma eremita*, known as the hermit beetle' (124)? Or that the habit of Amazon legionary ants of invading the anthills of other species and carrying the larvae to their own colony served as a springboard to debates about the morality of slavery (78)? The cumulative effect is not only intellectually stimulating, but potentially significant to human survival. As Drouin rightly points out, our fear of 'a world overrun by insects' has now been replaced by the horrifying prospect of 'a world from which insects have disappeared' (5). The time has passed when we could afford to not know or care about insects.

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