

Six Legs Better: A Cultural History of Myrmecology
Charlotte Sleigh
The Johns Hopkins University Press, Baltimore, 2007
302 pp., \$55 (hard)
ISBN 0-8018-8445-4

I read the introduction to this book with some trepidation, baffled by sentences such as, "And just as the essence of ant changed over the century from 1874 to 1975, so too did the epistemological desiderata of myrmecology." What, I asked myself, is "essence of ant?" Can I get a bottle of the stuff? As I toiled through the succeeding pages, however, I began to get caught up in the scholarly virtuosity of the work. This book has as its focus three giants of myrmecology: Auguste Forel (1848–1931), William Wheeler (1865–1937), and Edward Wilson (1929–). To be more precise, it is the progression of their views on insect societies that Sleigh finds so fascinating. The biographies and scientific discoveries of these notables occur in supporting roles to their paradigms.

Six Legs Better is a relatively short book (229 pp. + 64 pp. of "notes"), but densely written. There is a wide-ranging introduction, at the end of which Sleigh exclaims, in a lyrical entomological lapse, "And now the egg vibrates, the first imago emerges. . . ." The "imago" is Forel (42 pp.), followed by Wheeler (99 pp.) and Wilson (55 pp.). The long section of notes is conveniently organized with headings referring to the relevant pages, e.g., "Notes to Pages 106–108." Literature citations are embedded in the notes, as well as comments, often entertaining, that range from literary snippets to scholarly allusion and gossip. There is no separate reference section, and it was only after reading the entire text and all the notes that I realized that Sleigh cites everybody from Sigmund Freud to Margaret Meade, but omits any mention of the most important modern work on the social systems of ants, Hölldobler and Wilson's unavoidable, 732-page, 6-pound, giant-format book *The Ants* (Hölldobler and Wilson 1990).

To a myrmecologist, this book is intriguing because Sleigh has so carefully combed through the evolving theoretical literature on the nature of insect society. She included in her pursuit personal letters, the views of contemporaries, and more general influences of the cultural milieu. This provides valuable context for the practicing myrmecologist who is already well versed in the works of Forel, Wheeler, and Wilson. I would not recommend the book to a reader who is unfamiliar with the social systems of ants because these systems themselves are never described. Sleigh also deliberately ignores the observations and experiments that have largely guided the views of entomologists as they attempt to understand insect societies. She restricts herself to exhaustive analyses of the influences of philosophy, politics, religion, and personal relationships. This is myrmecology from which the ants themselves have been surgically removed. Readers are expected to fill this enormous gap from their own

knowledge. This may be the most narrowly specialized of any book on myrmecology; if it were perused by the ghost of Forel, he might well murmur, "Revenons a nos fourmis!"

The details from the personal lives of Forel, Wheeler, and Wilson feed our universal appetite for trivia, both relevant and irrelevant, about famous people. I freely admit I enjoyed reading that Wheeler sent the hide of a musk ox to Forel, although the significance of this anecdote escapes me. One reason why some of these anecdotes may seem less compelling to scientific readers is that a cultural historian does not have quite the same view of causality as a scientist. Forel, we learn, was exposed to ants at an early, impressionable age when, as a child, he used to escape into the garden to avoid his neurotically religious mother. This explains everything and nothing. Children have been darting out open doors to escape their overwrought parents ever since doors were invented. Almost none of these children, statistically speaking, have become great scientists. Wheeler, working in the cutting-edge area of developmental biology, found himself at a Texas university lacking facilities for such research, and turned to ants as convenient objects for low-tech study. Plenty of professors in similar straits have produced little notable research in an alternative area. Wilson, afflicted by poor vision and hearing, was, by his own account, channeled into a myrmecological career in which he could use his limited, myopic vision to observe small, relatively slow-moving critters. The notion that his handicaps inevitably destined him to be a myrmecological superstar is absurd. Cultural historians evidently trace causality backward, but scientists are concerned with predictability. We can only wish we could engineer a set of circumstances that would produce great scientists.

The gap between the cultural and "uncultural" history of science manifests itself in other ways, both obvious and subtle. Forel, Wheeler, and Wilson are typified, respectively, as having a psychological, sociological, and informational view of insect societies. This supposedly reflects their cultural environments. Culture, however, is largely relativistic; science, we hope, is not. We cannot, for example, be objectively judged right or wrong in our taste for alcohol (Forel was a teetotaler, Wheeler drank whiskey, Wilson likes a glass of wine), but we can definitely be right or wrong about which ant species have clear scent trails to a bait, and which show "tandem running." Scientists believe that scientific understanding advances toward reality; it is what Sleigh might call an indefinite teleological intellectual exercise. My own view of Forel is that he advanced understanding of insect societies not by using a "psychological" approach, but by using contemporary studies of both evolution and instinct to banish forever from science the idea that an ant colony is an intelligent and perhaps divinely inspired community. Wheeler, building upon this base, used his background in developmental biology to study caste determination, and also greatly expanded comparative studies of different lineages of social insects. Wilson,