WORLD CHAMPIONS IN EVOLUTION

IF YOU WERE A MARTIAN

Imagine you were a little green Martian gazing down on Earth. What would you think of humans, these odd creatures making such a huge impact on the planet? And what would you think of ants? Perhaps the ant would garner more attention than might seem reasonable to us. After all, we *Homo sapiens* are used to perceiving ourselves as masters of the globe. But to a stranger looking down from space, our dominance is not so obvious. Ants, you see, are a fair match for humanity, not only in numbers but also in terms of weight and evolutionary sophistication.

Determining the precise number of humans and ants is no easy task, but even a rough comparison shows that ants win, hands down. The world is home to some 10–100 billion *billion* ants, so even if we miscalculate their number by a factor of 100, or by a billion individuals, we are still vastly outnumbered. Looking instead at total weight or 'biomass', the ants' lead dwindles, yet even the most conservative scientists estimate that the planet's formican biomass exceeds its human biomass. Others estimate that ants outweigh humans by up to 100 times. Again, ants apparently take the gold. In our defence, the global ant community consists of about 12,000 described species,

whereas modern humans all belong to one species. At any rate, ants and humans are both indisputable heavyweights if we measure biological success in tonnage, boasting 900–9,000 and 420 million tonnes of biomass, respectively. By comparison the world's largest living animal – the blue whale – isn't even close to the biomass bronze, weighing in at a measly 0.5 million tonnes.

ANTS ARE LIKE US

Size may matter, but not as much as you might think. Imagine Martians zooming in for a closer look at the lives of our two races. Would they acknowledge humans as superior to ants? Probably not. They would find that humans are not the only life form with highly advanced social structures. Ants can also subdue, control and manipulate other organisms, and they too use medicinal substances. They can even adapt to deal with an unpredictable future through rationing, food storage and cannibalism. Also, the social evolution of ants is so highly refined that they practice complex – albeit nasty – manoeuvres such as *coups d'état* and slave raids.

Humanity is not the epitome of an evolutionary process. In many ways we are simply a delayed parallel product that would hardly impress a curious Martian. Humans are not alone in using agriculture and animal husbandry. Nor are we alone in collecting and transporting energy or reaching our goals by means of clear communication, efficient collaboration and the use of tools. Ants do all this too, and probably have done for

much longer than us – since ants have been around for more than 100 million years, whereas *Homo sapiens* arrived on the scene just 200,000 years ago. In other words, when we study ants we are not simply studying insects. We are observing a precursor to our own success.

MEET YOUR NEW FRIENDS

Down through the ages, humankind has been fascinated by the ant's life and habits. I've been told that virtually every language has a word for 'ant', though other animals often go unnamed. In many cultures sayings about ants abound, as in the Bible (Prov. 6:6): "Go to the ant, thou sluggard; consider her ways, and be wise". We know ants because they are everywhere, making their mark on the world, for like us, they can change their environment through their industriousness and strength in numbers. They conquer our homes with infuriating efficiency in their never-ending quest for resources. They burrow under our patios and paving stones so skilfully that we spend fortunes on pesticides, vainly attempting to keep them at bay. They chase us away in coordinated attacks if we spread our picnic blankets too close to their colonies. No wonder most people know ants well, and detest them. The funny thing is, the characteristics that make us hate them most – their appetite for conquest and their efficient exploitation of their surroundings – closely mirror distinctive human traits.

This little book takes you on a quick guided tour into the great wide world of ants, showing just how

much it resembles our own world. This journey is not merely fascinating in itself. It also explains why ants and humans are among the most successful beings on Earth, and by zooming in on our similarities we reveal essential ingredients in the recipe for biological success.

If these were reflections on management and leadership, I could have interviewed prominent figures in the Danish business community, captains in some of our small country's largest enterprises – Maersk, Lego and Vestas – hoping they would divulge some of the secrets behind their commercial success. But the prominent figures in this book are actors in a very different arena, on a very different scale. Meet the weaver ant, the honeypot ant, the wood ant, the leafcutter ant, the stinger ant, the headcutter ant and the black garden ant. You will learn how they handle critical tasks just as ingeniously as humans do. And that's not all. Comparisons between our two races show a huge potential for mutually beneficial collaboration. In short, ants are actually your friends … You just haven't been properly introduced yet.