

The Next Tenants

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"The number of mad scientists who wish to conquer the world," said Harry Purvis, looking thoughtfully at his beer, "has been grossly exaggerated. In fact, I can remember encountering only a single one."

"Then there couldn't have been many others," commented Bill Temple, a little acidly. "It's not the sort of thing one would be likely to forget."

"I suppose not," replied Harry, with that air of irrefragable innocence which is so disconcerting to his critics. "And, as a matter of fact, this scientist wasn't really mad. There was no doubt, though, that he was out to conquer the world. Or if you want to be really precise-to let the world be conquered."

"And by whom?" asked George Whitley. "The Martians? Or the well-known little green men from Venus?"

"Neither of them. He was collaborating with someone a lot nearer home. You'll realize who I mean when I tell you he was a myrmecologist."

"A which-what?" asked George.

"Let him get on with the story," said Drew, from the other side of the bar. "It's past ten, and if I can't get you all out by closing time this week, I'll lose my license."

"Thank you," said Harry with dignity, handing over his glass for a refill. "This all happened about two years ago, when I was on a mission in the Pacific. It was rather hush-hush, but in view of what's happened since there's no harm in talking about it. Three of us scientists were landed on a certain Pacific atoll not a thousand miles from Bikini, and given a week to set up some detection equipment. It was intended, of course, to keep an eye on our good friends and allies when they started playing with

thermo-nuclear reactions -to pick some crumbs from the A.E.C.'s table, as it were. The Russians, naturally, were doing the same thing, and occasionally we ran into each other and then both sides would pretend that there was nobody here but us chickens.

"This atoll was supposed to be uninhabited, but this was a considerable error. It actually had a population of several hundred millions-"

"What!" gasped everybody.

"-several hundred millions," continued Purvis calmly, "of which number, one was human. I came across him when I went inland one day to have a look at the scenery."

"Inland?" asked George Whitley. "I thought you said it was an atoll. How can a ring of coral-"

"It was a very plump atoll," said Harry firmly. "Anyway, who's telling this story?" He waited defiantly for a moment until he had the right of way again.

"Here I was, then, walking up a charming little river-course underneath the coconut palms, when to my great surprise I came across a waterwheel-a very modern-looking one, driving a dynamo. If I'd been sensible, I suppose I'd have gone back and told my companions, but I couldn't resist the challenge and decided to do some reconnoitering on my own.' I remembered that there were still supposed to be Japanese troops around who didn't know that the war was over, but that explanation seemed a bit unlikely.

"I followed the power-line up a hill, and there on the other side was a low, whitewashed building set in a large clearing. All over this clearing were tall, irregular mounds of earth, linked together with a network of wires. It was one of the most baffling sights I have ever seen, and I stood and stared for a good ten minutes, trying to decide what was going on. The longer I looked, the less sense it seemed to make.

I was debating what to do when a tall, white-haired man came out of the building and walked over to one of the mounds. He was carrying some kind of apparatus and had a pair of earphones slung around his neck, so I guessed that he was using a Geiger counter. It was just about then that I realized what those tall mounds were. They were termitaries . . . the skyscrapers, in comparison to their makers, far taller than the Empire State Building, in which the so-called white ants live.

"I watched with great interest, but complete bafflement, while the elderly scientist inserted his apparatus into the base of the termitary, listened intently for a moment, and then walked back towards the building. By this time I was so curious that I decided to make my presence known. Whatever research was going on here obviously had nothing to do with international politics, so I was the only one who'd have anything to hide. You'll appreciate later just what a miscalculation that was.

"I yelled for attention and walked down the hill, waving my arms. The stranger halted and watched me approaching: he didn't look particularly surprised. As I came closer I saw that he had a straggling moustache that gave him a faintly Oriental appearance. He was about sixty years old, and carried himself very erect. Though he was wearing nothing but a pair of shorts, he looked so dignified that I felt rather ashamed of my noisy approach.

"Good morning, I said apologetically. 'I didn't know that there was anyone else on this island. I'm with an- er-scientific survey party over on the other side.'

"At this, the stranger's eyes lit up. 'Ah,' he said, in almost perfect English, 'a fellow scientist! I'm very

pleased to meet you. Come into the house.<sup>4</sup>

"I followed gladly enough-I was pretty hot after my scramble -and I found that the building was simply one large lab. In a corner was a bed and a couple of chairs, together with a stove and one of those folding wash-basins that campers use. That seemed to sum up the living arrangements. But everything was very neat and tidy: my unknown friend seemed to be a recluse, but he believed in keeping up appearances.

"I introduced myself first, and as I'd hoped he promptly responded. He was one Professor Takato, a biologist from a leading Japanese university. He didn't look particularly Japanese, apart from the moustache I've mentioned. With his erect, dignified bearing he reminded me more of an old Kentucky colonel I once knew.

"After he'd given me some unfamiliar but refreshing Wine, we sat and talked for a couple of hours. Like most scientists he seemed happy to meet someone who would appreciate his work. It was true that my interests lay in physics and chemistry rather than on the biological side, but I found Professor Takato's research quite fascinating.

"I don't suppose you know much about termites, so I remind you of the salient facts. They're among the most highly evolved of the social insects, and live in vast colonies throughout the tropics. They can't stand cold weather, nor, oddly enough, can they endure direct sunlight. When they have to get from one place to another, they construct little covered roadways. They seem to have some unknown and almost instantaneous means of communication, and though the individual termites are pretty helpless and dumb, a whole colony behaves like an intelligent animal. Some writers have drawn comparisons between a termite colony and a human body, which is also composed of individual living cells making up an entity much higher than the basic units. The termites are often called 'white ants', but that's a completely incorrect name as they aren't ants at all but quite a different species of insect. Or should I say 'genus'? I'm pretty vague about this sort of thing . . . .

"Excuse this little lecture, but after I'd listened to Takato for a while I began to get quite enthusiastic about termites myself. Did you know, for example, that they not only cultivate gardens but also keep cows-insect cows, of course-and milk them? Yes, they're sophisticated little devils, even though they do it all by instinct.

"But I'd better tell you something about the Professor. Although he was alone at the moment, and had lived on the island for several years, he had a number of assistants who brought equipment from Japan and helped him in his work. His first great achievement was to do for the termites what von Frische had done with bees-he'd learned their language. It was much more complex than the system of communication that bees use, which as you probably know, is based on dancing. I understood that the network of wires linking the termitaries to the lab not only enabled Professor Takato to listen to the termites talking among each other, but also permitted him to speak to them. That's not really as fantastic as it sounds, if you use the word "speak" in its widest sense. We speak to a good many animals-not always with our voices, by any means. When you throw a stick for your dog and expect him to run and fetch it, that's a form of speech-sign language. The Professor, I gathered, had worked out some kind of code which the termites understood, though how efficient it was at communicating ideas I didn't know.

"I came back each day, when I could spare the time, and by the end of the week we were firm friends. It may surprise you that I was able to conceal these visits from my colleagues, but the island was quite large and we each did a lot of exploring. I felt somehow that Professor Takato was my private property, and did not wish to expose him to the curiosity of my companions. They were rather uncouth characters-graduates of some provincial university like Oxford or Cambridge.

"I'm glad to say that I was able to give the Professor a certain amount of assistance, fixing his radio and lining up some of his electronic gear. He used radioactive tracers a good deal, to follow individual termites around. He'd been tracking one with a Geiger counter when I first met him, in fact.

"Four or five days after we'd met, his counters started to go haywire, and the equipment we'd set up began to reel in its recordings. Takato guessed what had happened: he'd never asked me exactly what I was doing on the islands, but I think he knew. When I greeted him he switched on his counters and let me listen to the roar of radiation. There had been some radioactive fall-out-not enough to be dangerous, but sufficient to bring the background way up.

"I think,' he said softly, 'that you physicists are playing with your toys again. And very big ones, this time.'

"I'm afraid you're right,' I answered. We wouldn't be sure until the readings had been analyzed, but it looked as if Teller and his team had started the hydrogen reaction. 'Before long, we'll be able to make the first A-bombs look like damp squibs.'

"My family,' said Professor Takato, without any emotion, 'was at Nagasaki.'

"There wasn't a great deal I could say to that, and I was glad when he went on to add: 'Have you ever wondered who will take over when we are finished?'

"Your termites? I said, half facetiously. He seemed to hesitate for a moment. Then he said quietly, 'Come with me; I have not shown you everything.'

"We walked over to a corner of the lab where some equipment lay concealed beneath dust-sheets, and the Professor uncovered a

rather curious piece of apparatus. At first sight it looked like one of the manipulators used for the remote handling of dangerously radioactive materials. There were handgrips that conveyed movements through rods and levers, but everything seemed to focus on a small box a few inches on a side. 'What is it? I asked.

"It's a micromanipulator. The French developed them for biological work. There aren't many around yet.'

"Then I remembered. These were devices with which, by the use of suitable reduction gearing, one could carry out the most incredibly delicate operations. You moved your finger an inch-and the tool you were controlling moved a thousandth of an inch. The French scientists who had developed this technique had built tiny forges on which they could construct minute scalpels and tweezers from fused glass. Working entirely through microscopes, they had been able to dissect individual cells. Removing an appendix from a termite (in the highly doubtful event of the insect possessing one) would be child's play with such an instrument.

"I am not very skilled at using the manipulator,' confessed Takato. 'One of my assistants does all the work with it. I have shown no one else this, but you have been very helpful. Come with me, please.'

"We went out into the open, and walked past the avenues of tall, cement-hard mounds. They were not all of the same architectural design, for there are many different kinds of termites-some, indeed, don't build mounds at all. I felt rather like a giant walking through Manhattan, for these were skyscrapers, each with its own teeming population.

"There was a small metal (not wooden-the termites would soon have fixed that!) hut beside one of the mounds, and as we entered it the glare of sunlight was banished. The Professor threw a switch, and a faint red glow enabled me to see various types of optical equipment.

"'They hate light,' he said, 'so it's a great problem observing them. We solved it by using infra-red. This is an image-converter of the type that was used in the war for operations at night. You know about them?'

"'Of course,' I said. 'Snipers had them fixed on their rifles so that they could go sharp-shooting in the dark. Very ingenious things -I'm glad you've found a civilized use for them.'

"It was a long time before Professor Takato found what he wanted. He seemed to be steering some kind of periscope arrangement, probing through the corridors of the termite city. Then he said: 'Quick-before they've gone!'

"I moved over and took his position. It was a second or so before my eye focused properly, and longer still before I understood the scale of the picture I was seeing. Then I saw six termites, greatly enlarged, moving rather rapidly across the field of vision. They were traveling in a group, like the huskies forming a dog-team. And that was a very good analogy, because they were towing a sledge . . . .

"I was so astonished that I never even noticed what kind of load they were moving. When they had vanished from sight, I turned to Professor Takato . My eyes had now grown accustomed to the faint red glow, and I could see him quite well.

"'So that's the sort of tool you've been building with your micromanipulator!' I said. 'It's amazing-I'd never have believed it.'

"'But that is nothing,' replied the Professor. 'Performing fleas will pull a cart around. I haven't told you what is so important. We only made a few of those sledges. The one you saw they constructed themselves.'

"He let that sink in: it took some time. Then he continued quietly, but with a kind of controlled enthusiasm in his voice: Remember that the termites, as individuals, have virtually no intelligence. But the colony as a whole is a very high type of organism -and an immortal one, barring accidents. It froze in its present instinctive pattern millions of years before Man was born, and by itself it can never escape from its present sterile perfection. It has reached a dead-end-because it has no tools, no effective way of controlling nature. I have given it the lever, to increase its power, and now the sledge, to improve its efficiency. I have thought of the wheel, but it is best to let that wait for a later stage-it would not be very useful now. The results have exceeded my expectations. I started with this termitary alone-but now they all have the same tools. They have taught each other, and that proves they can cooperate. True, they have wars-but not when there is enough food for all, as there is here.

"'But you cannot judge the termitary by human standards. What I hope to do is to jolt its rigid, frozen culture-to knock it out

of the groove in which it has stuck for so many millions of years. I will give it more tools, more new techniques-and before I die, I hope to see it beginning to invent things for itself.'

"'Why are you doing this?' I asked, for I knew there was more than mere scientific curiosity here.

"Because I do not believe that Man will survive, yet I hope to preserve some of the things he has discovered. If he is to be a dead-end, I think that another race should be given a helping hand. Do you know why I chose this island? It was so that my experiment should remain isolated. My super termite, if it ever evolves, will have to remain here until it has reached a very high level of attainment. Until it can cross the Pacific, in fact . . . .

"There is another possibility. Man has no rival on this planet. I think it may do him good to have one. It may be his salvation.'

"I could think of nothing to say: this glimpse of the Professor's dreams was so overwhelming-and yet, in view of what I had just seen, so convincing. For I knew that Professor Takato was not mad. He was a visionary, and there was a sublime detachment about his outlook, but it was based on a secure foundation of scientific achievement.

"And it was not that he was hostile to mankind: he was sorry for it. He simply believed that humanity had shot its bolt, and wished to save something from the wreckage. I could not feel it in my heart to blame him.

"We must have been in that little hut for a long time, exploring possible futures. I remember suggesting that perhaps there might be some kind of mutual understanding, since two cultures so utterly dissimilar as Man and Termite need have no cause for conflict. But I couldn't really believe this, and if a contest comes, I'm not certain who will win. For what use would man's weapons be against an intelligent enemy who could lay waste all the wheat fields and all the rice crops in the world?

"When we came out into the open once more, it was almost dusk . It was then that the Professor made his final revelation.

"In a few weeks,' he said, 'I am going to take the biggest step of all.'

"And what is that? I asked.

"Cannot you guess? I am going to give them fire.'

"Those words did something to my spine. I felt a chill that had nothing to do with the oncoming night. The glorious sunset that was taking place beyond the palms seemed symbolic-and suddenly I realized that the symbolism was even deeper than I had thought.

"That sunset was one of the most beautiful I had ever seen, and it was partly of man's making. Up there in the stratosphere, the dust of an island that had died this day was encircling the earth. My race had taken a great step forward; but did it matter now?

"I am going to give them fire.' Somehow, I never doubted that the Professor would succeed. And when he had done so, the forces that my own race had just unleashed would not save it . . . .

"The flying boat came to collect us the next day, and I did not see Takato again. He is still there, and I think he is the most important man in the world. While our politicians wrangle, he is making us obsolete.

"Do you think that someone ought to stop him? There may still be time. I've often thought about it, but I've never been able to think of a really convincing reason why I should interfere. Once or twice I nearly made up my mind, but then I'd pick up the newspaper and see the headlines.

"I think we should let them have the chance. I don't see how they could make a worse job of it than we've done."