SATELLITE
science fiction

FEBRUARY, 1957 Vol. 1, No. 3

A COMPLETE NOVEL

PLANET FOR PLUNDER

by HAL CLEMENT
and SAM MERVIN JR.

The alien's mission was grim, purposeful and scientific. It was only natural that he should mistake men for machines and machines for men. Earth's terrible predicament was not of his making, but it came close to destroying Man.

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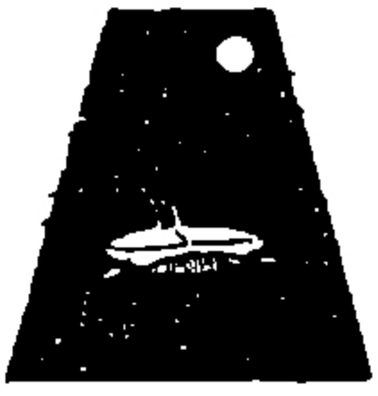

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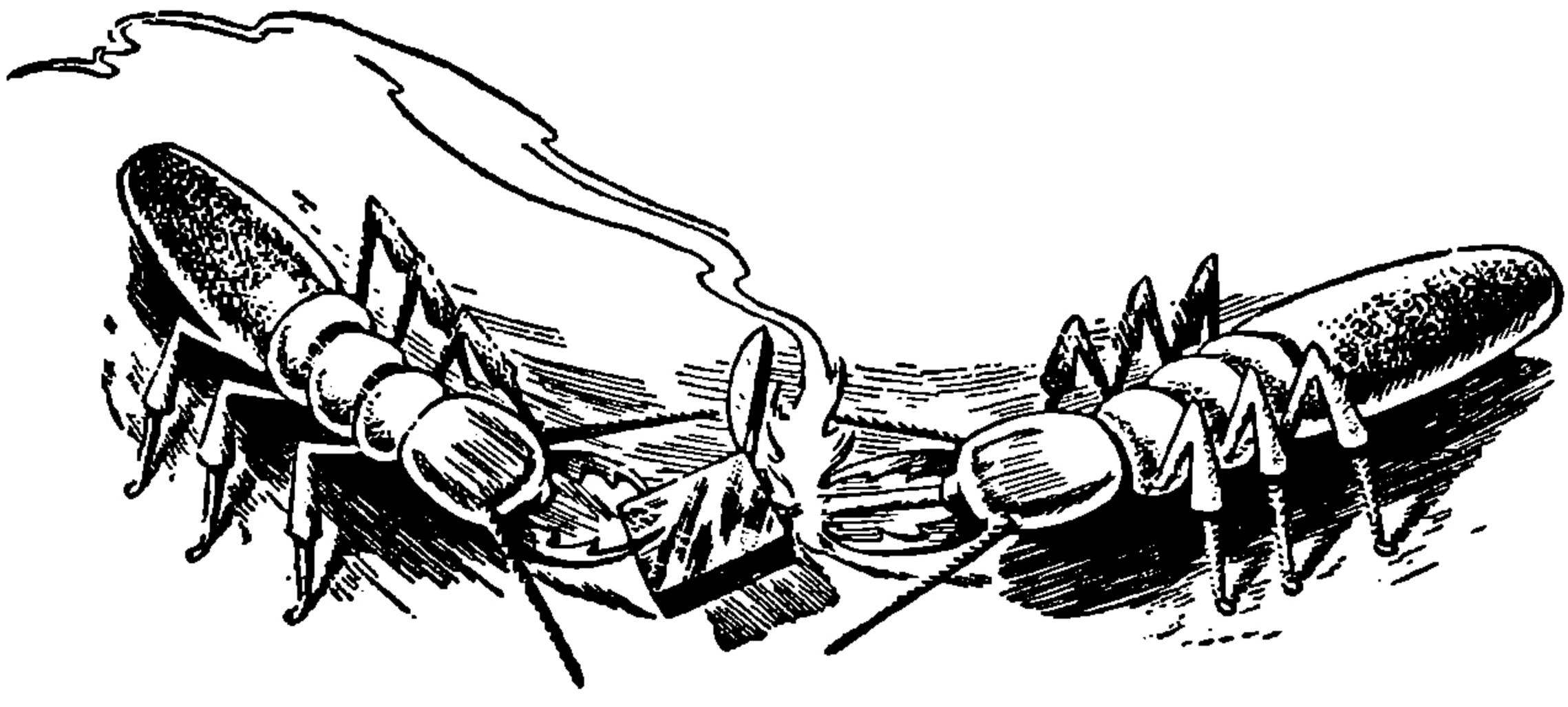
THE NEXT TENANTS

We can expect to hear odd confessions over a bar. However, mercifully seldom are they as strange or quite as terrifying as this one.

by ARTHUR C. CLARKE



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 irrefragible 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 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 don'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 some 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. 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 million—"

"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, 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 waterwheel, 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 there 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—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 mustache 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 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.'

"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 were a bed and a couple of chairs, together with a stove and one of those folding washbasins campers use. That seemed to sum up the living arrangements. But everything was very neat and tidy. My unknown friend might 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 mustache I've mentioned. With his erect, dignified bearing, he reminded me rather 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 could 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'll remind you of the salient facts. Termites are 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 travel 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 termitary 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. 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 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 Id 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 themselves, but also permitted him to speak to them. That's not really as fantas-

tic 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 every 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 individual exploring. I felt, somehow, that Professor Takato was my private property. I did not wish to expose him to the curiosity of my companions. They were rather uncouth characters—graduates of some provincial non-specialized universities like Oxford or Cambridge.

"I'm glad to say that I was able to give the Professor a certain amount of assistance, helping him fix his radio and line 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 met, his counters began 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 island, 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 enough 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 replied.' We couldn't be sure until the readings had been analyzed, but it looked as if Teller and his team had begun 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 visible 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 countered, 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 long on each 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 such an organ—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 this to no one else, 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 piece of metal—not wooden, for the termites would soon have fixed that—beside one of the mounds. 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 infrared. 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 they could go sharpshooting 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, probing through the corridors of the termite city. Then he said, 'Quickly —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 viewing. 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. This 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. I haven't told you what is so important. We only made a few of those sledges. *The one you just 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 termites, as individuals, have virtually no intelligence. But the colony as a whole is a very high type of organism—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 feel it best to let that wait for a later stage—it would not be very useful now. The results have exceeded my expectations. I began, with the termitary alone—but now they all have the same tools. They have taught each other, and that proves they can co-operate. 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 techniques—and, before I die, I hope to see this organism 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 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 supertermite, 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 dream was so overwhelming—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.

"It was not that he was hostile to mankind—he was sorry for Man. 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 hours, 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 wheatfields, 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 beyond the palms seemed symbolic—and, suddenly, I realized that the symbolism ran 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. 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 for my interfering. 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."