

THE BEES OF KNOWLEDGE

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It scarcely seems necessary to relate how I first came to be cast on to Handrea, like a man thrown up on a strange shore. To the Bees of Handrea these details, though possibly known to them, are of negligible interest since in their regard I rate as no more than an unremarkable piece of flotsam that chanced to drift into their domain. Let it suffice, then, that I had paused to say a prayer at the shrine of Saint Hysastum, the patron saint of interstellar travellers, when an explosion in the region of the engine room wrecked the entire liner. The cause of the catastrophe remains a mystery to me. Such accidents are far from common aboard passenger ships, though when they do occur subsequent rescue is an uncertain hope, owing to the great choice of routes open to interstellar navigators and their habit of changing course in mid-flight to provide additional sightseeing.

My timely devotions saved my life, though reserving me for a weirder fate. Within seconds I was able to gain a lifeboat, which was stationed thoughtfully adjacent to the shrine and, amid flame and buckling metal I was ejected into space. After the explosion, picking my way through the scattered debris, I learned that no one but myself had escaped.

The crushing sense of desolation that comes over one at such a moment cannot adequately be described. Nothing brings one so thoroughly face to face with blind, uncaring Nature as this sudden, utter remoteness from one's fellow human beings. Here I was, surrounded by vast light years of space, with probably not another human soul within hundreds of parsecs, totally alone and very nearly helpless.

My feeling of isolation mounted to a state of terror when I discovered that the rescue beacon was not operating. Once again I had recourse to prayer, which calmed me a little and brought me to a more hopeful appraisal of my situation. The lifeboat, I reminded myself, could keep me alive for up to a year if all went well. There would have been little point in activating the beacon immediately in any case. The star liner would not be reported missing for several weeks, and taking into account the delay before a search was organised, and the dozens of possible routes to be surveyed, a sweep within range of the beacon might not occur for months, if at all. During that time its repair seemed a feasible project, or at any rate not a hopeless one.

But it could not be done conveniently in space, and I peered again through the lifeboat's portholes. On one side glimmered a reddish-yellow sun. Close by on the other side hung a big murky globe resembling an overripe fruit – the planet Handrea, to provide a view of which the star liner had been slowing down at the time of the explosion. It had received its name but an hour previously from one of the passengers (the privilege of naming newly sighted worlds being another of the minor perquisites of interstellar travel) and had already been ascertained as being tolerable as regards chemistry and geology. So, heartened by having at least some course of action to pursue, I turned my small lifeboat towards it.

As I passed through them I made a careful recording of the bands of magnetism and radiation that planets of this type usually possess, noting as I did so that they were uncommonly strong and complicated. I was perturbed to find that the atmosphere was a deep one, descending nearly seven hundred miles. Upon my entering its outer fringes the sky turned from jet black to dark brown and the stars quickly vanished from sight. A hundred miles further down I entered a sphere of electrical storms and was buffeted about by powerful gusts. It had been my intention, had Handrea looked unduly inhospitable, to fly straight out again, but before long it was all I could do to keep on an even keel, not being an expert pilot. Eventually, much relieved after a harrowing passage, I entered the layer of calm air that lies close to the surface and accomplished a landing amid large tufts of a plant which, though maroon in colour, could fairly be described as grasslike.

I peered at the landscape. Vision was limited to about a

hundred yards, and within this span I saw only the mild undulations of the ground, the drab coloration of the vegetation, the dull grey air. Instruments told me that the air was dense, but not of the intolerable pressure suggested by the depth of the atmosphere, consisting of light inert gases and about five per cent oxygen. The temperature, at twenty degrees, was comfortable enough to require no special protective clothing.

After a while I put on an oxygen mask – not trusting myself to the outside's natural mix – and equalised pressures before opening the hatch. Taking with me the life-boat's tool kit, I stepped outside to remove the beacon's service plate.

Underfoot the maroon grass had a thick-piled springy texture. As I moved the air felt thick, almost like water, and perfect silence prevailed. I tried to close my mind to the fact that I stood on an alien and unknown planet, and concentrated on the task in hand.

I worked thus for perhaps twenty minutes before becoming aware of a low-pitched droning or burring sound, which, almost before I could react to it, swelled in volume until it made the air vibrate all about me. Like the parting of a curtain the opaque atmosphere suddenly disgorged two huge flying shapes. And so I saw them for the first time: the Bees of Handrea.

Describing them offers no particular difficulties, since unlike many alien forms of life they can be compared with a terrestrial species. They are, of course, vast if measured alongside our Earthly bees, and the resemblance is in some respects a superficial one. The body, in two segments, is nearly twice the size of a man, the thorax being very large and round so as to make the creature closest in appearance, perhaps, to our bumble bee. As in the terrestrial bee the fur is striped but only slightly so – a relic, I would guess, from some previous evolutionary period the Bees have passed through – the stripes being fuzzy fawn and soft gold, so that the Bees seemed almost to shine in their monotonous environment.

On Earth this great mass could never take to the air at all, but the density of Handrea's atmosphere enables such a creature to be supported by two pairs of surprisingly small wings which vibrate rapidly, giving off the pronounced drone I had first noticed. The Bees move, moreover, with all the speed and agility of their Earthly counterparts. Their

arrival occasioned me some alarm, naturally, and I attempted to make a hasty retreat into the lifeboat, but I had time to take only a couple of steps before one of the huge creatures had darted to me and lifted me up with its frontward limbs which ended in tangles of hooks and pincers.

The desperation of my initial struggles may be imagined. From acquaintance with Earthly insects I had expected instantly to receive some dreadful sting which would paralyse me or kill me outright, and I fought with all my might to free myself from the monster. In the struggle my oxygen mask was torn loose and fell to the ground, so that for the first time, with a cold shock, I drew Handrea's air into my lungs. All my efforts were to no avail; no sting was forthcoming, but the Bee merely modified its powerful grip so as to leave me completely helpless, and I was borne off into the mists, leaving the lifeboat far behind.

The two Bees flew, as near as I could tell, in a straight line, keeping abreast of one another. The narrow patch of landscape in my view at any one time presented no change of aspect, but we travelled through the foggy, impenetrable air at what seemed to me a prodigious speed. Unhindered now by my oxygen mask, the world of Handrea met my senses with a new immediacy. The breath that coursed through my nostrils smelled damp, bearing hints of dank vegetable fragrance. Quite separate from this, I was aware of the much stronger smell of the Bee that carried me – a sharp, oddly sweet smell that could not be ignored.

Reminding myself of insect habits, I was fearful now of a much worse fate than being stung to death. My imagination worked apace: these Bees would hardly have seized me for nothing, I told myself, and in all probability their intention was to use me as a body in which to lay eggs, so that the larvae could feed off my live flesh. In my despair I even contemplated the sin of suicide, wondering how I might kill myself before the worst happened. When I remember these fears now, my present circumstances seem relatively good.

On and on we droned, the increasing distance between myself and the lifeboat, and the virtual impossibility of my ever returning to it, causing me no small agony of mind. At least an hour, and possibly several, passed in this fashion before the Bees' destination came looming out of the fog.

At first I took the shape ahead to be an oddly-formed mountain until its artificial nature became apparent. Then it emerged as an uneven, elongated dome whose limits

passed entirely out of sight in the dimness: a stupendous beehive. I now know its height to attain several thousand feet, with nearly the same proportions at the base. As we came closer a generalised humming could be heard emanating from the huge edifice. At the same time I saw giant bees flitting hither and thither, coming and going from the great hive.

We approached an entrance set about a hundred feet from ground level and without pause passed through to the interior. I observed a number of Bees stationed just within the opening, some apparently standing guard, others vibrating their wings rapidly, presumably to ventilate the hive as bees do on Earth. Indeed, their work set up such a wind that the clothes were nearly torn from my back as my captors alighted on the floor of the vestibule. From this chamber several passages radiated – that, at least, was my first impression. As my captors set off down one of these I realised that in fact the openings all connected with one another; the internal structure of the hive was largely an open one, the space of any level being divided by the pillars which supported the next.

I will not dwell on how fully I appreciated the horror of my apparent situation as I was dragged into this den. Bees swarmed everywhere, and their pungent-sweet smell was overpowering. To think that I, a human being bearing a spark of the divinity, was reduced to the role of some smaller insect for these beasts, as if I were a caterpillar or a grub, affected me almost as strongly as the thought of the physical horror which I had no doubt was to come. Deeper and deeper I was carried into the hive, descending and ascending I did not know how many levels. It was like a vast city, filled with the rustling, buzzing and chittering of its inhabitants. Once my captors (they remained together) were accosted by a group of their fellows and performed a kind of wagging dance, at the same time emitting loud noises which sounded like the wailing of a whole team of buzz-saws. Finally our journey came to an end: the two Bees halted in a bowl-shaped depression some tens of feet across, and the hold on my aching body was at last released.

I tumbled, rolled over, and steeled myself to take my first good look at the Bee's head: the faceted eyes glinting with myriad colours, the rolled proboscis, the tufted cheeks and the swollen cranium, all of which are now so familiar to me. Unable to bear the suspense any longer I squeezed my eyes

shut and tried not to exist. Now it would come – the deep-thrusting sting, mortal as any sword, or the cruel insertion of the ovipositor.

The muscular limbs turned me over and over, bristly fur scratching my skin. When, after some time, nothing else transpired I opened my eyes a little. The two Bees were huddled over me, holding me almost in a double embrace, and fondling me with their forelegs. Their wings trembled; their droning buzz-saw voices, with no articulation that I could discern, rose and fell in harmony. The movements of the forelegs became light and caressing, so that I wondered what kind of insect ritual I was being subjected to. Then, to my surprise, the manipulatory claws began clumsily to strip me of my clothing. Shortly I lay naked, while my garments were lifted one by one, inspected and tossed aside.

The Bees' attention returned to my naked body, probing it with a feather-like touch, examining orifices, holding me upside down or in whatever fashion was convenient, as though I were an inanimate object. I experienced a moment of supreme terror when a stiff digit entered my anus and slid up my rectum. The organ withdrew in a second or two, but I was left in little uncertainty of mind as to what had taken place.

At length the Bees seemed to have finished. One wandered off, while the other lifted me up and took to the air again. I observed that we were in a spacious vault, allowing the Bees ample room for flight and somewhat dimly lit (unlike much of the hive I had passed through). We swooped low to pass under a barrier, swam up a sort of gully, and emerged in yet another vault even larger, whose far side was not clearly visible but which contained great indistinct piles. On one of these the Bee unceremoniously dropped me, and I sprawled and slithered down a slope composed of loose objects, like a rubbish heap.

After the Bee had flown away my urgent concern was with the eggs I felt sure it had deposited in my rectum. I felt up with my finger as far as I could, but encountered nothing. I decided it was imperative to sweep out the passage straight away. After a great deal of frantic straining I managed to pass an amount of fecal matter and examined it anxiously for sign of the eggs. There was none, and eventually I concluded with immense relief that the Bee's intrusion had been exploratory, nothing more.

Finding myself unexpectedly alive and unharmed, I was

able to take a more leisurely interest in my surroundings. The first question to pique my curiosity was how the interior of the hive came to be lighted, when it should have been in complete darkness. Some parts of it, in fact, were bathed in a fairly bright haze. Peering at the near-by wall of the vault, I saw that the material out of which the hive was constructed was itself fluorescent, thus explaining the mystery. I pondered a little further on the nature of this material. Being phosphorescent it was very likely organic in origin, I reflected. Possibly the Bees used their own excrement as a building material, as termites do on Earth.

Perhaps this luminosity was an accidental by-product and extraneous to the Bees' needs. But if it formed part of their economy then it was a wonderful example of the ingenuity of Nature, which had evolved phosphorescent excrement for such a purpose.

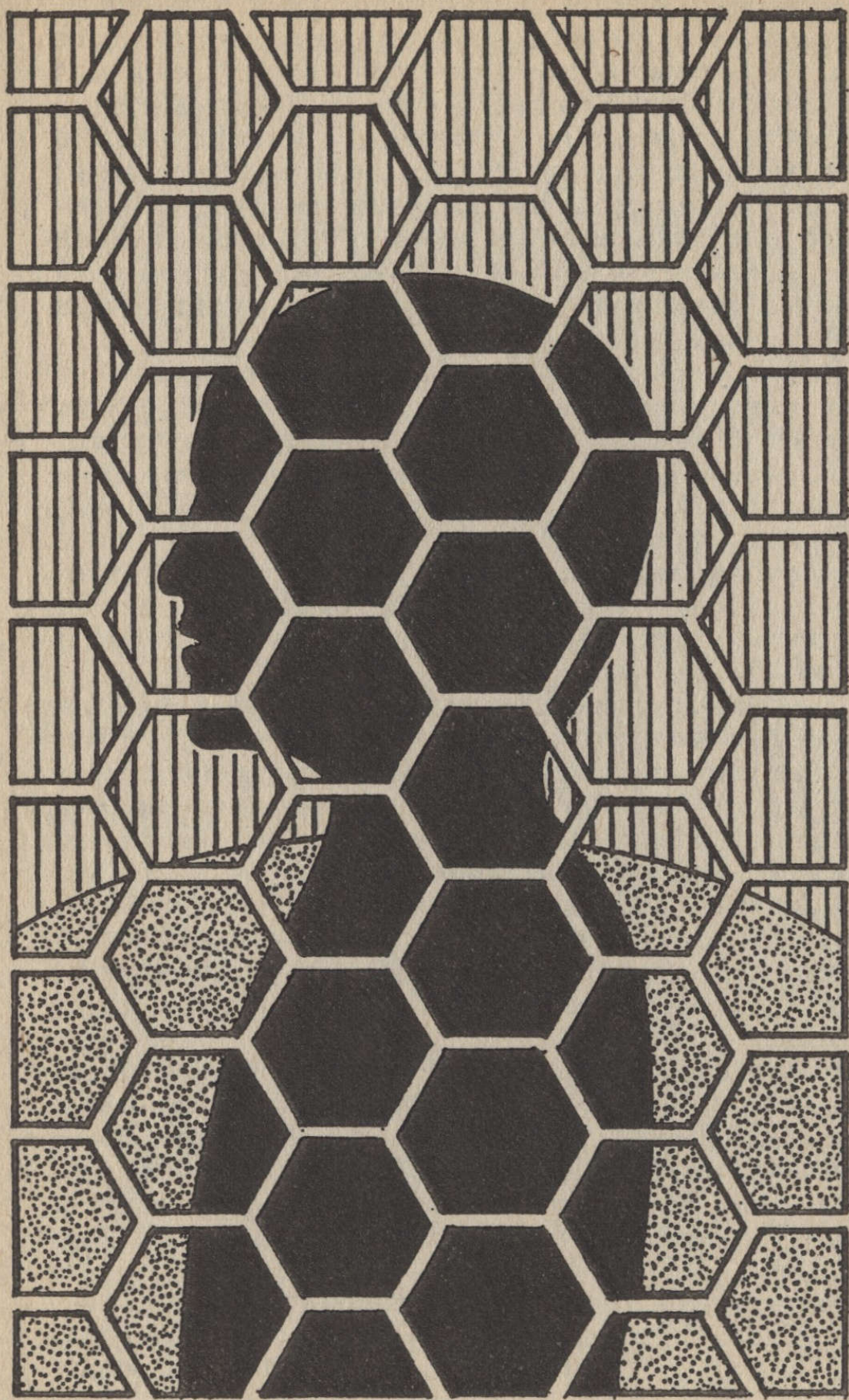
I pulled myself upright on the unsteady pile where I was precariously perched and took a closer survey of my immediate environs. I stood on a jumble of objects of various shapes and sizes, all indistinct in the gloom. Bending, I picked one up.

The thing was made of a substance indistinguishable from wood. And it was a carving of some kind of animal, perhaps another giant insect, with a peculiar flowering snout. I was not sure whether the representation was meant to be a naturalistic one or whether it was fanciful; what was in no doubt was that it was the product of art.

I dropped it and selected another object. This turned out to be something whose purpose I could not decipher: a black rod about three feet in length with a hemispherical bowl attached to one end. But again, I judged it to be artificial.

In a state of fresh excitement I extended my explorations. The heap proved to be varied in its composition; much of it consisted of decayed vegetable matter. But buried in it, strewn on top of it, piled here and there, was a treasure house of alien artefacts too diverse to describe. Many of them were rotted, broken and crushed, but others seemed intact and even new.

What was the reason for this rubbish heap? Who had manufactured the artefacts? Not the Bees – somehow that did not strike me as a likely proposition, and the impression was confirmed when I found what I could only call, from its shape and size, a drinking cup.



A. Rickards

Bees would not use drinking cups.

Somewhere on this planet, then, was an intelligent race. While I was mulling this over there came a loud droning noise and another Bee entered the vault, dropped an article on the heap and departed. I scrambled towards the discarded object and discovered it to be a mysterious instrument consisting of hinged and interlocking boxes.

I recalled the manner in which I had been snatched from the ground while attempting to repair my rescue beacon, and all seemed to become clear to me. The Bees had a magpie instinct: they were collectors of any object they came across that attracted their attention. I, just like anything else, had been added to their mindless hoard.

For some time that remained the total of my understanding of the Bees of Handrea.

At length I clambered down from the pile and began to explore beyond the vault. By now hunger was beginning to affect me, and while I still could not speculate as to what my future might be, I wondered as to the possibility of obtaining food.

My needs were answered much sooner than I had expected. Half an hour of probing (trying always to keep track of my movements) brought me to a wall which exuded a heavy, sweet aroma. This wall was made of a golden bread-like substance which crumbled and broke easily in the hand to yield chunks from which seeped a light yellow syrup. It had every appearance of being edible, and though afraid of poisoning myself I sampled a morsel, recalling that though the protein structure of alien life may differ from our own, that protein is everywhere constructed out of the same small group of amino acids, into which the digestive system decomposes it. I was soon reassured: the bread was delicious, sweet without being nauseous, and of a texture like honey-cake. As a food it proved completely satisfying. I ate a quantity of it, reasoning as I did so that in all probability this was a corner of the Bees' food store, or at any rate of one of a number of such stores.

My meal was interrupted by a rustling sound. I was alarmed to see the approach of an insect-like creature, smaller than the Bees and indeed somewhat smaller than myself, but nevertheless of horrifying appearance. I was put in mind of a fly – not the common housefly, but something closer to a mosquito, with small folded wings and spike-like proboscis. I ran for my life, but on rounding a corner of the

passageway, and hearing no sound of pursuit, I stopped and cautiously peeped back. The Fly had inserted its proboscis into the honey-bread and was presumably sucking out the liqueur.

I decided to risk no further confrontation but made my way back to the vault where lay the junk-heaps. There I discovered some pools of brackish water and further refreshed myself. Then I set about finding a weapon in case I should need to defend myself against monsters such as I had just witnessed – or, for that matter, against the Bees, though I fervently hoped I should not be called upon to fight such prodigious creatures. After some searching I found a long metal pole with a pointed end which would serve tolerably well as a spear.

The vault seemed empty, lonely, silent and echoing. From afar came the continual murmur of the business of the hive, like the ceaseless activity of a city, but it barely broke the silence. Already I had begun to think of the place as a refuge, and eventually I found a spot for myself where, wearied and strained by my experiences, I settled down to sleep.

On waking I drank more water and made the short trip to obtain more honey-bread. Then, naked though I was, and armed with my spear, I set out to explore the hive in earnest.

Thus began a fairly long period in which I acquainted myself with the life of the great bee-city, though in what I now know to be a superficial way. Slowly and tentatively I explored the passages and galleries, making sure all the time that I could find my way back to the familiar territory of the junk heaps where I was at least assured of water and food, and to which I periodically returned to rest. Always I made my way upwards, searching for the entrance by which I had been brought into the hive.

The Bees, who busied themselves everywhere, consistently ignored me. I discovered that the hive was host to numerous other parasites like myself, species of insects and giant worms who had made their home here and were apparently tolerated, if they were noticed at all. Usually (but not invariably) they were smaller than the bees, and either stole honeybread or stalked one another for food. Thus for any

but the Bees themselves (who of course were never attacked) the hive was a jungle in which every ecological niche was filled.

The dangers to myself were considerable, and I soon found that I had been lucky in my choice of weapon, for the spear enabled me to keep most predators at bay. Nevertheless my early experiences were horrifying. On my first reconnoitre I was attacked three times: twice by grub-like beasts with hideous scissor-type jaws, and once by something resembling a giant mite whose habit it is to drop a net on passers-by from above. I could not free myself from this trap for some time, during which I was obliged to fight for my life while still enmeshed, wielding the spear through the holes and finally killing my adversary.

I quickly learned which species were harmless and which to beware. I learned to recognise the kind of corners and approaches the predators were apt to lurk in, and so these bouts of deadly combat became much less frequent.

My third sortie brought me at last to the entrance. I hesitated on the approach to the vestibule, seeing ahead of me the humped shapes of the guards, and bracing myself against the wind set up by the whirring wings of the ventilator Bees. So powerful was this dense current that when I finally went forward I was obliged to edge myself across the floor with the help of my spear. I stopped close to the broad slot-like opening and looked out into the free air of Handrea.

A fog-like cold smote my skin, in contrast to the warmth of the hive. I could see only thick misty air which eddied and swirled as more Bees came to alight inside the entrance. The ground was quite out of sight.

I believe the guards would not have prevented me from leaving the hive. I could have scrambled down its rough surface to the ground. But where to then? I had no means of achieving the goal which had been uppermost in my mind: that of returning to the lifeboat and completing the repair of the beacon. Not only had I no idea of which direction to take, but I had no way of holding to that direction if I found it. Once away from the hive I would be unlikely to locate it again, and would die of hunger or thirst or else fall victim to larger predators than I had yet seen.

But could I accept the corollary: that I must live out my remaining years in the hive with the status of a parasitic worm? A curiously forlorn, deserted feeling came over me: I had been treated badly during the explosion on the pas-

senger liner; my companions had all died and been spared any further problems, but I had been excluded from the common fate and left alone, abandoned by death.

This odd and sinful feeling lasted but a minute or two. With heavy heart I made my way back down below, wondering if I could pluck up the courage for the near-suicidal attempt to retrace the course of the Bees who had brought me here. When I arrived at the junkheaps an extraordinary sight met my eyes. There, flung at a lurching angle atop the nearest pile, was the lifeboat!

I scrambled up the heap towards it with a cry of joy. On reaching the small spacecraft, however, I was in for a crushing disappointment. It had been gutted. Everything had been stripped from it, inside and out, leaving only an empty shell.

Strewn over a fairly wide area round about was all the equipment with which the lifeboat had been stocked. To my astonishment every item had been torn to pieces: the Bees seemed to exhibit a destructive animal curiosity over everything they touched. I found the beacon after searching for some minutes. Like everything else it was completely wrecked, practically disintegrated component by component. Any kind of repair was absolutely out of the question, and after staring at the remains for some while in a state of shock, I sat down and buried my face in my hands, sobbing to think what life was to mean to me from now on.

For some time afterwards wild schemes were apt to enter my head. It occurred to me that perhaps I was not necessarily doomed to remain indefinitely in the hive. Judging by the contents of the junkheaps intelligence existed somewhere on the planet, and the Bees visited the scene of that intelligence. I entertained the notion of clinging to a Bee's back, possibly attaching myself there by means of a harness, and flying with it to where life might be more agreeable, even though I still would not be among my own kind. It was even possible, I conjectured (remembering that some of the artefacts I had seen denoted a fairly advanced technology) that once learning of my plight the creatures I met would be kind enough to set up a beacon of their own to signal the rescue ship, if I could explain its mode of operation clearly enough.

These plans served chiefly to ward off my despair, for

common sense told me how unlikely they were to succeed. My faith also came under great strain at this time, but I am glad to say I retained it, though with some difficulty at first, and prayer was, as ever, my solace.

But as the days succeeded one another my mood turned to one of apathy, although I tried to rouse myself to action and to remind myself that the time remaining before a search expedition arrived within signalling distance was not unlimited. Thinking that I should fashion a harness with which to carry out my project of riding on a Bee, I began to sort through the junkheaps. The detritus of alien industry was fascinating to browse through. I presumed at first that the artefacts were all the product of the same civilisation, but later I realised that I had no verification of this. Indeed I could construct no picture of a single culture out of the objects I perused; rather they suggested a number of different, quite unconnected civilisations, or even species.

I was also struck by the number of artefacts which were clearly not tools or ornaments and whose use could not easily be discerned. At length I discovered some of the more curiously shaped of them to bear close-packed markings, and I surmised that these and others, including some I believed to be electronic in operation, were books or records of some kind, though I could not explain why they made up such a large percentage of the junkheaps.

My desultory efforts to escape the hive were all brought to an end when an extraordinary event occurred. I had gone on another exploratory foray with the intention of making some rough assessment of Bee anatomy when the usual bumbling activity of the hive turned to a state of agitation. I heard sounds of rending and general destruction, and on investigating perceived that numbers of the Bees were engaged in tearing down parts of the hive. The reason for this soon became apparent: they were clearing a passage for a great ship, too large to enter the hive by any of its entrances or to negotiate its interior spaces.

The ship was clearly built to ride on water. Of a wood-like material, it had a sweeping profile at least a hundred and fifty feet long, with an elegant pattern of raised decks at intervals, stepped slightly higher forward and aft. In its general lines the closest resemblance would be, I suppose, to a Greek galley, a resemblance heightened by the carving which adorned the fore and aft railings and the protruding wales which swept from stem to stern. The brute force by

which the Bees moved this ship was a sight to behold. They must have flown it here an unknown distance by the concerted power of their wings alone – a feat which even in Handrea's thickened atmosphere was astonishing – and now they nudged, heaved and strained at it in their hundreds, wings buzzing in a deafening clamour (for it appeared to be their wings they mostly used to gain traction). The ship lurched forward foot by foot, grinding and crushing everything in its path, shouldering aside masses of building material where the cleared pathway was not wide enough, and causing yet more to come crashing down behind it. Where it had passed Bees set to work immediately to repair the damage, a task which I knew they could accomplish with unbelievable rapidity.

Steadily the ship was being edged into the heart of the hive. I crept forward, dodged past Bee bodies, and found myself able to clamber up the side of the vessel. Briefly I found myself standing on the deck, which, I was interested to see, was inlaid with silvery designs. I could see no sign of any crew. A moment later I heard an impatient buzz behind me and a bristly limb knocked me over the side. I fell to the ground, winded and badly bruised.

Slowly the ship jerked from view amid clouds of dust and a rain of rubble, swaying cumbersomely. Limping, I followed, still curious and wondering how the Bees were regarded by the intelligent race or races from whom they filched so many valuable artefacts.

It occurred to me that for all my wanderings I had remained in the peripheral region of the hive, my mind obsessed by the idea of escape. Vaguely I had imagined the hive to present the same aspect wherever one stood in it, but venturing deeper into the interior in pursuit of the ship I saw my mistake. The light strengthened to become a golden ambience in which the golden fur of the Bees shone. The architecture of the hive also changed. The monotonous tiered floors gave way to a more complex structure in which there were spiral ramps, great halls, and linked chambers of various shapes, sometimes comprising whole banks of huge polyhedra of perfect geometrical regularity, so that the hive came to resemble more and more the 'golden palace' beloved of the more sentimental naturalists when writing of Earthly Bees. And the sharp-sweet odour of these Bees, to which I thought I had become accustomed, became so strong that I was almost stifled.

All these wonders, like everything else about the Bees, I understood up to this moment to be the product of instinct. I had almost caught up with the lurching ship when I saw something which gave me pause for thought.

A number of artefacts had apparently fallen from the ship in the course of its progress and lay about in the rubble. One Bee lingered and was playing with a device of a shiny brown material, in shape somewhere between a sphere and a cube and numbering among its features several protuberances and a circular plate of dull silver. The Bee touched a protuberance with a foreleg, and the plate came abruptly to life.

I edged closer to spy on what was taking place. The plate showed a full-colour motion picture that at first was of no recognisable object or scene. After some moments I realised that it was displaying a series of geometrical figures arranged in a logical series. A mathematics lesson!

To my bemusement the huge insect's gaze seemed intent on the picture plate. Shortly it again touched the protuberance, which was a control of the sliding sort, and the picture changed to a text in some kind of writing or ideograms, illustrated by enigmatic symbols. Again the Bee followed the lesson with every appearance of understanding it, but even when this was succeeded by the Bee's manipulating various knobs in seemingly skilful fashion, eliciting information at will, I still could not grasp what the evidence of my eyes suggested.

The Bee turned to another pastime. It turned the device over and in a few moments had removed the outer casing. A mass of close-packed parts was revealed, which the Bee took to pieces with surprisingly delicate pincers. I thought I was seeing the usual destructiveness I already had cause to complain of on the part of these insects, but was astonished by what followed. With the machine in fragments, the Bee suddenly set to work to put it all together again. In a minute or two it was again functioning perfectly.

Along came a second Bee. A buzz-saw exchange took place between them. Wings trembled. The first Bee again stripped down the machine. Together they played with the components, assembling and disassembling them several times over, their droning voices rising and falling, until finally they tired of the game and the pieces were flung carelessly to the ground.

There could be no doubt of it. The Bees were intelligent! And they understood technology!

Saint Hysastum, I thought, you have answered my prayers!

How foolish I had been to give practically no thought to this possibility! How ridiculous to plan journeys across Handrea when the answer lay right here under my nose!

But why had the Bees behaved towards me like brute beasts? I recalled that I had been outside the lifeboat when they arrived. Possibly I had been taken for a denizen of their own planet. They had mistaken my nature, just as I had mistaken theirs.

But it was imperative that I enlighten them without delay. I dashed forward, right under the gaze of those huge mosaic eyes, and began scratching diagrams in the dust with my spear. A circle, a triangle, a square, a pentagon – surely a sentient creature familiar with mathematics (as my recent observations showed the Bee to be) would recognise these as signs of intelligence on my part? The Bee did not seem to notice and made to move off, but I skipped forward again, placing myself impetuously in its path, and again began my eager scribbling. I made three dots, then another three, followed by six dots – a clear demonstration that I could count! For good measure I scribbled out the diagram that accompanies Pythagoras' theorem, even though it is perhaps too elaborate for a first contact between species. The Bee seemed nonplussed for a moment. But then it brushed me aside and passed on, followed by its companion.

My frantic efforts as I sought to make contact with the Bees during the next hour or two approached the level of hysteria. All was to no avail. I remained a nonentity as far as they were concerned: I spoke to them, gesticulated, drew, showed them my spear and play-acted its use, but was simply ignored. From their conduct, which to all appearances exemplified insect mindlessness, it was hard to believe that they really possessed intelligence.

At last, disheartened and perplexed, I returned to my quiet refuge in the vault of the junkheaps. I was not completely alone there: the Fly, the mosquito-like creature I had first encountered at the honeybread bank, was pottering about among the rubbish. I often met this creature on my trips to the honeybread, and occasionally it ventured into the vault and roamed aimlessly among the heaps of artefacts. Never having received any threat from it, I had come to accept its presence.

Sighing and despairing, I fell at length into a light sleep.
And as I slept I dreamed.

We came between a defile in the hills and ahead of us, with mist rising and falling about it like steam, lay the Hive. Bees came hither and thither in ceaseless streams. Otwun, my Handreatic companion, a member of one of the mammalian species of the planet, laid a hand on my shoulder.

'There it is,' he said. 'The Hive of the Bees of Knowledge, where is made the Honey of Experience.'

I glanced into his opal eyes. From the cast of his face I knew he was feeling a certain kind of emotion. 'You seem afraid of these creatures,' I remarked. 'Are they dangerous?'

'They are voracious and implacable,' he answered. 'They know everything old and discover everything new. They range over the whole world in search of knowledge, which is their food, taking it wherever they find it. Yet no man can communicate with them.'

'An aloof intelligence then? No pacts or alliances are made with the Bees? No wars or quarrels?'

'Such is out of the question. The Bees are not beings such as the warm-blooded races. They belong in the class of creeping, crawling and flying things. Come, we must pass by the Hive if we are to be about our business.'

We went forward, the fine rain laying a mantle about our shoulders and casting the Hive in a lush setting. We skirted the Hive to the east, but suddenly a huge Bee loomed out of the mist and hovered before us, giving off a loud buzzing sound that wavered up and down the scale. Although Otwun had told me it was impossible to communicate with the Bees the buzzing penetrated my brain like bright light through glass and seemed somehow to bypass the speech centre to impart information directly to my consciousness. A terrifying flood of knowledge of the most dazzling and intellectual kind overwhelmed me and caused me almost to faint . . .

I awoke with the dream vivid in my mind. It was the kind of dream that leaves behind it a mingling of hopeful emotions, seeming to convey a message more real than waking reality itself. I strove to recover the tacit details of the dream - what, for instance was the important business

on which I and Otwun were engaged? But these were gone, as they often are in dreams, and I was left with only the central theme: the nature of the Bees of Handrea. Of this I had received a direct and compelling impression, much more comprehensive than was implied by Otwun's few remarks.

Every sentient creature's intelligence is modified by its ancestral nature. Bees are honey gatherers. Hence when intellectual curiosity developed in the Bees of Handrea it took just this form. The Bees liked to forage into their world seeking to satisfy their avid thirst for knowledge and to bring back their findings into the hive. The physical objects they brought back were of cursory interest only: their main diet was of intellectual ideas and observations, which they were adept at stealing from surrounding civilisations.

This interpretation of the Bees made such an impression on me that, irrationally perhaps, I accepted it as literally true. I believed I had been vouchsafed a minor vision by Saint Hysastum to help me. Then I recalled a passage by the philosopher Nietzsche who lived some centuries ago. Although a heathen in his outlook Nietzsche had many insights. Here he depicted man's mind as a beehive. We are honey gatherers, bringing in little loads of knowledge and ideas – exactly like the Bees of Handrea.

Nietzsche was also the inventor of the doctrine of eternal recurrence, which posits that since the universe is infinite and eternal everything in it, including the Earth and all its inhabitants, must somewhere, sometime, be repeated. If one follows this argument further then it means that every product of man's imagination must somewhere be a reality – and here was Nietzsche's mental beehive, not as the analogy he had conceived, but a literal reality! What a strange confirmation of Nietzsche's beliefs!

There was a slurping sound. The Fly was sucking up water from one of the tepid pools.

Elsewhere on Handrea, the dream had reminded me, were other races, less alien than the Bees and more amenable to contact. Should I perhaps stock up with honeybread and strike out on foot in the hope of finding them? But no – the message of the dream clearly indicated that it was with the Bees that my salvation lay. It would be wrong to reject Saint Hysastum's advice.

Accordingly I turned my mind again to the problem of

making my nature and my requirements known. To advertise myself as a calculating, tool-making creature seemed to me the best approach. I conceived a plan, and rummaging through the junk and scrap I gathered together the material I needed and set to work.

In an hour or two I had made my Arithmetical Demonstrator. It consisted of a circular board around whose circumference I had marked, with a soft chalk-like substance I found, the numbers One to Twenty-Five in dot notation, so that any sighted intelligent creature anywhere in creation could have recognised them. Pinned to the centre of the board were two pointers each of a different shape, so that the whole affair looked much like a clock.

The Demonstrator was simple to operate. With the first hand I would point to two numbers successively, and then point to their sum with the second hand. Once I had caught the attention of the Bees in this way I would write the addition sign on the board, then write the multiplication sign and perform a few simple multiplications. In the same manner I would also be able to demonstrate subtraction and division and leave the Bees in no doubt as to my rationality.

Sitting halfway up the junkheap, I practised with the completed board for a short while. Suddenly the sound of dislodged rubbish close behind me made me jump. Turning, I saw that the Fly had descended furtively on me from the top of the heap and its head was craned forward in what I took to be a menacing manner.

In my alarm I half-rolled, half-scrambled down the heap, forgetting all about the demonstration board and trying to think where I had left my spear. The Fly made no attempt to follow me, however. When I next saw it, about ten minutes later, it had climbed down the far side of the heap and was squatting on the ground as if preoccupied. To my exasperation I saw that it was in possession of my Arithmetical Demonstrator.

Having found my spear I decided to use the Fly's own tactic against it to recover the board. Carefully, making as little noise as possible, I skirted round the heap and climbed up it on all fours so as to bring myself above and behind the Fly. Then I began a stealthy descent, reasoning that a noisy attack at close quarters would be enough to scare the insect into abandoning the board just as I had done.

Less deftly than the Fly I climbed to within a few feet of it. Its hearing did not seem particularly acute: it took no

notice of my less than silent approach. But before I launched on onslaught I noticed something purposeful about the movement of its foreleg and stayed my hand.

The Fly was playing with the Demonstrator, displaying computations on it exactly as I had intended.

On each occasion it moved the first pointer twice and the second pointer once.

Five and Eight equals Thirteen. Addition.

Four and Six equals Twenty-Four. Multiplication.

The fourth or fifth manipulation I observed made me think at first that these results were coincidental. Two and Three equals Eight. Incorrect.

Then it struck me. Two to the *power* Three equals Eight!

My amazement, not to say bewilderment, was so great that the spear dropped from my hand. I could not doubt but that the Fly, too, possessed intellectual power.

Here was my introduction to the Bees!

But why was the Fly, if it belonged to an intelligent species, living the life of a scavenger? Was it perhaps trapped in the Hive, as I was? Or was *every* insect species on Handrea intelligent, as a matter of course?

I slithered to the ground and stood near the Fly, forcing myself to disregard its powerful stench. It moved back but a few feet when I reached out my hand to pick up the demonstration board and regarded me intently as I spelled out the initial steps of our dialogue.

So began an incredible period of learning and interchange between my friend the Fly and myself. To be honest the learning was mostly on his part, for I could never have absorbed information as he did.

The Fly's memory was as rapid and unfaltering as a computer's. Everything I showed him he knew instantly. First I introduced him to the Arabic decimal notation and then, though he seemed content to rush into an orgy of abstruse calculation, I induced him to learn alphabetical writing. He mastered words and concepts with machine-like ease, and in the space of a few weeks we were able to converse on almost any subject, using an alphabetical version I made of the demonstration board.

My new friend's curiosity was prodigious. He asked me where I came from, and what was the size and distance of my home planet. He then asked how the spaceship that had

brought me here had been propelled, and I explained it to him as best as I was able. I also managed to elicit from him one or two scraps of information about Handrea, though his answers were vague.

The Fly's chief obsession, however, lay in the mathematics of numbers. In this he was a wizard, possessing the type of brain that the human race produces perhaps once in a couple of centuries. I was never able to understand a fraction of what the Fly knew about numbers. It would have taken a Fermat or a Poincaré to keep up with him.

There was much wonderment in the thought of what strange vessels God chooses to imbue with his divine spark. I had little enthusiasm, however, for exploring the more recondite properties of Fibonacci numbers, prime numbers and the like, and as soon as was practicable I broached the subject that was the aim of the entire operation as far as I was concerned: would the Fly help me to establish relations with the Bees, so that I might persuade them to construct a rescue beacon for me?

While I posed this question on the alphabet board the Fly was hunched over the much improved number board. Although I was sure he read my request as I presented it to him he gave no sign of understanding it and continued playing with his own board.

Annoyed, I snatched the number board away from him and repeated my demand. The Fly squatted there, unmoving. As I was coming near the end of my letter-pointing he casually shuffled to the number-board again and continued his rapid calculations, which I believed concerned number curios of a high order but which I was in no position to follow without textual explanations.

I asked:

'Why will you not answer me?'

And was ignored.

I made increasingly desperate attempts at a closer accord and similarly was rebuffed, while the Fly continued his mathematical orgy in what looked increasingly like a frantic ecstasy. It suddenly occurred to me that up until my request for help none of our exchanges had been in the nature of true conversation but had consisted purely of an exchange of dry knowledge. Otherwise the Fly was behaving like someone who had not quite realised I existed – indeed, except for his obvious intelligence, like an idiot. Or a witless animal.

My failure to create a true relationship with the Fly was extremely disappointing. It taught me yet again how different was the intelligence of the Handreatic insects from my own. I concluded, after taking to the board for further attempts at a more personal contact, that I had been mistaken in thinking that the Fly was speaking to me when using the boards. Except for his initial enquiries into my origins he had been talking to himself, using the boards as a new toy or tool of thought.

So depressing was this reversal to my hopes that I felt unutterably weary. I reflected that I had wasted several weeks on what had proved to be a blind alley, and that if the Fly had rejected me as a fellow sentient being then so, probably, would the Bees. I dragged myself away from the busy insect, and flung myself down to sleep.

Otwun caught my arm and dragged me past the hovering Bee, whereupon normal perception returned to me. The Bee flew away and left us standing in the rain-sodden grass.

'What - what happened?' I asked dully.

'By accident you touched the mind of the Bee with your mind. It happens sometimes. Come, we must make haste if we are to arrive in time to take part in the assault against Totcune. Our Kessene allies will not wait indefinitely.'

I looked down at the arm he held. Unlike his arm, which was pale green, mine was a dark brown. Understanding for the first time that I also was a Handreatic I looked down at the whole of myself. My race was different from Otwun's. I was smaller, squat, like a goblin beside his lankness.

'Come.'

He noticed me gazing at the Hive. 'Men have sometimes entered the Hive to taste the Bees' honey,' he said. 'None have come out again, to my knowledge.'

'It would be a great adventure.'

'Only for a fool who no longer wishes to live.'

'Perhaps. Give my greetings to the Kessene.'

I moved away from him, walking slowly towards the Hive.

I had slept but a few minutes, and on waking found my mind buzzing with new energy.

The dream. I was sure the dream was telling me what to

do. I had taken the Bees too much for granted, not pondering enough as to their true nature. And yet all I had to do was to think about terrestrial bees.

The gathering of nectar was not the end of the bees' food-making process. That nectar was taken into the hive and made into honey. The same must be true, I reasoned, of the Bees of Handrea and their gathering of knowledge. That knowledge was further refined in the depths of the Hive. But what was the honey that resulted from this refining?

Men have sometimes entered the Hive to taste the Bees' honey.

The Bees of knowledge; the honey of experience. The phrase came into my mind, I did not know from where.

Of course! The answer came to me in a flash. It explained everything – why the Bees ignored me, why they pulled artefacts to pieces and abandoned them, apparently fashioning nothing similar themselves.

Social insects, as individuals, are not complete. They live only to serve the hive, or colony. Usually they are biologically specialised to perform specific functions and are oblivious of any other. Workers do not know sex. Drones do not know anything else.

The individual Bees I had encountered were not, by themselves, intelligent. What *was* intelligent was the *Hive Mind*, the collectivity of all the Bees, existing as some sort of separate entity. This Mind sent out its golden insects to bring back items of interest from the surrounding world. The Bees collected ideas and observations which were then mulled over by the Mind to provide itself with experience. Because the Hive Mind itself had no direct perception; everything had to come through the Bees.

Experience was the honey that was made from this dry, arid knowledge. It was the Hive Mind's food.

And it was the Hive Mind, not the individual Bees, that would understand my needs!

Could it have been the Hive Mind and not Saint Hysastum, I wondered, that had been calling to me through my dreams? At any rate my course of action seemed clear. I must descend deep into the Hive in search of the Mind, hoping that I could contact it somehow.

The Fly was still fiddling with the number board when, for the last time, I left the dim vault of the junkheaps. How close I was to the truth – and yet how far! Armed as usual

with my spear I set off, heading for the very centre of the Hive where I imagined the Mind to manifest itself.

The damage caused by dragging the alien ship into the interior had all been repaired. The ceaselessly busy and largely inconsequential-looking activity of the giant insects went on all around me. The Bees rushed to and fro, buzz-saw voices rising and falling and wings trembling on meeting, or performed their odd wagging dance before one another. Except for their size and some physical differences it could have been any beehive on Earth.

I journeyed through the golden chambers I have already described. Beyond these lay a labyrinth of worm-like tunnels in which were interspersed empty egg-shaped chambers or nests. I discovered this to appertain to the Hive's reproductive arrangements, for eventually I entered a part of the labyrinth that was not empty. Here larvae crawled about the chambers, tended by worker Bees. Then I suddenly broke through the labyrinth and was confronted by an enormous honeycombed wall extending far overhead. Each cell of this honeycomb evidently contained an egg, for newly-hatched larvae were emerging here and there and crawling down the surface.

Somewhere, conceivably, was a huge bloated queen, mother to the whole Hive. Could this queen constitute the intelligence I sought? I rejected the idea. As among Earthly insects, she would be totally overburdened with her egg-laying role and unfit for anything else.

A longitudinal slit, about eight foot in height, separated the honeycomb from the ground. Since my destination lay in this direction I passed through it and walked, in semi-darkness, for a time with the bulk of the honeycomb pressing down above me.

Then the space seemed to open up abruptly and at the same time I was in the midst of a golden haze which intensified with each step I took, so that the limits of the place I was in were indistinct. Vague shapes loomed at me as if in a dream. Among them was the alien ship I had seen carried into the Hive, sliding past me as if into a mist.

My foot caught against something. The floor was littered with objects of all kinds so as to resemble the floor of the vault of the junkheaps, except that here they were bathed in the golden ambience covering everything. I went on, picking my way among them. Presently I heard a familiar buzzing sound. Ahead of me were a number of Bees that

appeared to be in an ecstatic trance. Their legs were rigid, their wings were open and vibrating tremulously, their antennae quivered, while the droning they gave off had an almost hypnotic effect.

During the course of my journey I had gradually become aware of an oppressive feeling in my head and an aching sensation at the bridge of my nose. These feelings became unbearably strong in the golden haze. I looked at the gathered Bees and understood that this was the place where their honey was processed, or perhaps where it was stored. With that thought the aching in my head became like a migraine and then suddenly vanished. Something pushed its way into my brain.

I tasted the Bees' honey. I experienced as the Bees experience.

The dream had been a precursor. But it could not have prepared me for such total immersion. What is experience? It comes through the senses, is processed by the mind and presented to the consciousness. The Bees' honey bypasses all these, except perhaps the last. It is raw experience, pre-digested, intensified, blotting out everything else.

This honey has an actual physical basis. It is magnetism. Handrea's magnetic field, as I have mentioned earlier, is unusually strong and intricate. The Bees have incorporated this magnetic intricacy into their evolution. By means of it they are able to perform a kind of telepathy on the creatures they borrow their knowledge from, using magnetic currents of great delicacy to read the memory banks of living minds. By tuning in to Handrea's magnetic field they know a great deal about what is taking place across the planet, and by the same means they can extend their knowledge into space within the limits of the field. Thus they knew of the accident aboard the passenger liner, and perhaps had learned much of mankind before I ever set foot on Handrea.

Sometimes magnetic strains from this golden interior store sweep through the Hive in wayward currents. Twice these currents had impinged on my mind to create dreams, giving me the information that had led me into this trap.

I do not know how long my first trance lasted. When it ended I found myself lying on the floor and understood that I must have been overwhelmed by the rush of impressions and passed out. Clarity of the senses lasted only a few

minutes, however. The magnetic furore swept through my brain again, and once more I was subjected to amazing experiences.

One does not lose consciousness during these trances. It is rather that one's normal perceptions are blotted out by a stronger force, as the light of a candle is annihilated by the light of the sun.

And what are these stronger experiences?

How am I to describe the contents of alien minds?

At first my experiences were almost wholly abstract, but possessing a baroque quality quite different from what one normally thinks of as abstract. When I try to recall them I am left with a sense of something golden and ornate, of sweetish-musk aromas and of depth within depth.

Like my friend the Fly the Bees are much interested in mathematics, but theirs is of a type that not even he would be able to understand (any more than I could, except intuitively when I was in the grip of the trance). What would he have made, with his obsession with numbers, of the Bees' theorem that there is a highest positive integer! To human mathematicians this would make no sense. The Bees' accomplish it by arranging all numbers radially on six spokes, centred about the number One. They then place on the spokes of this great wheel certain number series which are claimed to contain the essence of numbers and which go spiralling through it, diverging and converging in a winding dance. All these series meet at last in a single immense number. This, according to the theorem, is the opposite pole of the system of positive integers, of which One is the other pole, and is referred to as Hyper-One. This is the end of numbers as we know them. Hyper-One then serves as One for a number system of a higher order.

But, to show the hypothetical nature of the Bees' deliberations there is a quite contrary doctrine which portrays all numbers as emanating from a number Plenum, so that every number is potentially zero.

These are items, scraps, crumbs from the feast of the Bees' honey. The raw material of this honey is the knowledge and ideas that the individual Bees forage from all over Handrea. In the safety of their Hive the Bees get busy with this knowledge, converting it into direct experience. With the tirelessness of all insects they use it to create innumerable hypothetical worlds, testing them, as it were, with their prodigious intellects to see how they serve as vehicles for

experience. I have lived in these worlds. When I am in them they are as real as my own. I have tasted intellectual abstractions of such a rarified nature that it is useless for me to try to think about them.

But as my brain began to accommodate itself to the honey my experiences became more concrete. Instead of finding myself in a realm of vast theoretical calculation I would find myself sailing the seas of Handrea in a big ship, walking cities that lay somewhere on the other side of the globe, or participating in historical events, many of which had taken place thousands of years previously. Yet even here the Bees' intellectual preoccupations asserted themselves. Nearly always the adventures I met ended in the studies of philosophers and mathematicians, where lengthy debate took place, sometimes followed by translation into a world of pure ideas.

There was a third stage. My experiences began to include material that could only have come from my own brain. I was back in my home city on my home planet. I was with my friends and loved ones. I relived events from the past. None of this was as it has actually happened, but restructured and mixed together and always with mingled emotions of joy, regret and nostalgia, as happens in dreams. In addition I lived fantastic scenes from fiction; even comic-strip caricatures came to life, as if the Bees did not know the difference between them and reality.

My own world came, perhaps, to be my own private corner of the honey-store, for it was certainly only a minor item in the Bees' vast hoard. Yet what a sense of desolation I feel on coming out of it, in the periods when for some reason the magnetic currents no longer inflame my brain, and realise that it is only hallucination! Then I find myself in this arid, lonely place, with Bees buzzing and trembling all around me, and crawl from the chamber for near-by food and water, knowing that I shall never, in reality, see home again.

I have been here many years. My hair and beard are long and shaggy now that I no longer trim them. Often at the beginning I tried to break away from this addiction to the Bees' honey, but without it the reality of my position is simply too unbearable. Once I even dragged myself halfway back to the vault of the junkheaps again, but I knew all the time that I would be forced to return, so great is the pull of those waking dreams.

The time is long past, of course, when a rescue beacon could do anything to help me. Not that there was ever any chance of constructing one. Because the Bees are not intelligent.

Incredibly, but truly, they are not intelligent. They have intellect merely, pure intellect, but not intelligence, for this requires the exertion both of the intellect and of the feelings – and of the soul. The Bees have no feelings, any more than any insect has, and – of this I am convinced – God has not endowed them with souls.

They are insects, merely. Their intellectual powers, their avid thirst for knowledge, are but instincts with them, like the instinct that prompts them to feats of engineering and which, in the past, has also misled men into thinking the ants, termites and bees of Earth to be intelligent. No rational mind, able to respond to and communicate with other rational minds, lies behind their voracious appetite.

It seems fitting that if by some accident or quirk of nature intellectual brains should evolve in that class of creature roughly corresponding to our terrestrial arthropods (and Handrea offers the only case of this as far as I know, even though insect-like fauna are abundant throughout the universe) they should do so in this bizarre fashion. One does not expect insects to be intelligent, and indeed they are not, even when endowed with analytical powers greater than our own.

But how long it took me to grasp this fact when I strove so desperately to convey messages to the Hive Mind! For there *is* a Hive Mind; but it has no qualities or intelligence that an individual Bee does not have. It is merely an insect collectivised, a single Bee writ large, and would not be worth mentioning were it not for one curious power it has, or that I think it has.

It seems able by some means I cannot explain to congeal objects out of thought. Perhaps they are imprinted on matter by magnetism. At any rate several times I have found in the chamber small artefacts which earlier I had encountered in visions, and which I do not think could have been obtained on Handrea. Once, for instance, I found a copy of a newspaper, including in its pages the adventures of the Amazing Human Spider.

For all the abstract knowledge available to me my grip on concrete reality has steadily deteriorated. I can no longer say with certainty which of the experiences given me by the

honey really happened in my former life and which are alterations, interpolations or fantasies. For instance, was I really a companion of the Amazing Human Spider, a crime-fighter who leaps from skyscraper to skyscraper by means of his gravity-defying web?

Recently I discovered a small bound book in which was written all the events I have outlined in this account.

I do not know whether I have copied my story from this book, or whether the book was copied by the Bees from my mind.

What does it matter? I do not know for certain if the book, or any of the other objects I found in the chamber, really existed.

And so here I remain and must remain, more a parasite upon these monsters than I ever had imagined I could be. For monsters they are – monsters in the Satanic sense. How else can one describe creatures of such prodigious knowledge and such negligible understanding? And for my enjoyment I have this honey – this all-spanning knowledge. Mad knowledge, too great for human encompassing and fit only for these manic Bees and the work of their ceaseless insect intellects. It is knowledge that has no meaning, nothing to check or illuminate it, and which produces no practical end.

Only one true solace is left to me: I know that even here, amid the unseeing Bees of Handrea, far from the temples and comforts of my religion, God is present.