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THE VIBRATION WASPS

by FRANK BELKNAP LONG

Enormous, they were—like Jupiter—and unutterably terrifying to Joan—

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CHAPTER I
OUT IN SPACE

I was out in space with Joan for the sixth time. It might as well have been the eighth or tenth. It went on and on. Every time I rebelled Joan would shrug and murmur: "All right, Richard. I'll go it alone then."

Joan was a little chit of a girl with spun gold hair and eyes that misted when I spoke of Pluto and Uranus, and glowed like live coals when we were out in space together.

Joan had about the worst case of exploritis in medical history. To explain her I had to take to theory. Simply to test out whether she could survive and reach maturity in an environment which was hostile to human mutants, Nature had inserted in her make-up every reckless ingredient imaginable. Luckily she had survived long enough to fall in love with sober and restraining me. We supplemented each other, and as I was ten years her senior my obligations had been clear-cut from the start.

We were heading for Ganymede this time, the largest satellite of vast, mist-enshrouded Jupiter. Our slender space vessel was thrumming steadily through the dark interplanetary gulfs, its triple atomotors roaring. I knew that Joan would have *preferred* to penetrate the turbulent red mists of Ganymede's immense primary, and that only my settled conviction that Jupiter was a molten world restrained her.

We had talked it over for months, weighing the opinions of Earth's foremost astronomers. No "watcher of the night skies" could tell us very much about Jupiter. The year 1973 had seen the exploration of the moon, and in 1986 the crews of three atomotor-propelled space vessels had landed on Mars and Venus, only to make the disappointing discovery that neither planet had ever sustained life.

By 2002 three of the outer planets had come within the orbit of human exploration. There were Earth colonies on all of the Jovian moons now, with the exception of Ganymede. Eight exploring expeditions had set out for that huge and mysterious satellite, only to disappear without leaving a trace.

I turned from a quartz port brimming with star-flecked blackness to gaze on my reckless, nineteen-year-old bride. Joan was so strong-willed and competent that it was difficult for me to realize she was scarcely more than a child. A veteran of the skyways, you'd have thought her, with her slim hands steady on the controls, her steely eyes probing space.

"The more conservative astronomers have always been right," I said. "We knew almost as much about the moon back in the eighteenth century as we do now. We get daily weather reports from Tycho now, and there are fifty-six Earth colonies beneath the lunar Apennines. But the astronomers knew that the moon was a sterile, crater-pitted world a hundred years ago. They knew that there was no life or oxygen beneath its brittle stars generations before the first space vessel left Earth.

"The astronomers said that Venus was a bleak, mist-enshrouded world that couldn't sustain life and they were right. They were right about Mars. Oh, sure, a few idle dreamers thought there might be life on Mars. But the more conservative astronomers stood pat, and denied that the seasonal changes could be ascribed to a low order of vegetative life. It's a far cry from mere soil discoloration caused by melting polar ice caps to the miracle of pulsing life. The first vessel to reach Mars proved the astronomers right. Now a few crack-brained theorists are trying to convince us that Jupiter may be a solid, cool world."

Joan turned, and frowned at me. "You're letting a few clouds scare you, Richard," she said. "No man on Earth knows what's under the mist envelope of Jupiter."

"A few clouds," I retorted. "You know darned well that Jupiter's gaseous envelope is forty thousand miles thick —a seething cauldron of heavy gases and pressure drifts rotating at variance with the planet's crust."

"But Ganymede is mist-enshrouded too," scoffed Joan. "We're hurtling into *that* cauldron at the risk of our necks. Why not Jupiter instead?"

"The law of averages," I said, "seasoned with a little common sense. Eight vessels went through Ganymede's ghost shroud into oblivion. There have been twenty-six attempts to conquer Jupiter. A little world cools and solidifies much more rapidly than a big world. You ought to know that."

"But Ganymede isn't so little. You're forgetting it's the biggest satellite in the solar system."

"But still little—smaller than Mars. Chances are it has a solid crust, like Callisto, Io, and Europa."

There was a faint, rustling sound behind us. Joan and I swung about simultaneously, startled by what was obviously a space-code infraction. A silvery-haired, wiry little man was emerging through the beryllium steel door of the pilot chamber, his face set in grim lines. I am not a disciplinarian, but my nerves at that moment were strained to the breaking point. "What are you doing here, Dawson," I rapped, staring at him in indignation. "We didn't send for you."

"Sorry, sir," the little man apologized. "I couldn't get you on the visi-plate. It's gone dead, sir."

Joan drew in her breath sharply. "You mean there's something wrong with the cold current?"

Dawson nodded. "Nearly every instrument on the ship has gone dead, sir. Gravity-stabilizers, direction gauges, even the intership communication coils."

Joan leapt to her feet. "It must be the stupendous gravity tug of Jupiter," she exclaimed. "Hadley warned us it might impede the molecular flow of our cold force currents the instant we passed Ganymede's orbit."

Exultation shone in her gaze. I stared at her, aghast. She was actually rejoicing that the Smithsonian physicist had predicted our destruction.

Knowing that vessels were continually traveling to Io and Callisto despite their nearness to the greatest disturbing body in the Solar System, I had assumed we could reach Ganymede with our navigation instruments intact. I had scoffed at Hadley's forebodings, ignoring the fact that we were using cold force for the first time in an atomotor propelled vessel, and were dependent on a flow adjustment of the utmost delicacy.

Dawson was staring at Joan in stunned horror. Our fate was sealed and yet Joan had descended from the pilot dais and was actually waltzing about the chamber, her eyes glowing like incandescent meteor chips.

"We'll find out now, Richard," she exclaimed. "It's too late for caution or regrets. We're going right through forty thousand miles of mist to Jupiter's *solid* crust."

CHAPTER II
THROUGH THE CLOUD BLANKET

I thought of Earth as we fell. Tingling song, and bright awakenings and laughter and joy and grief. Woodsmoke in October, tall ships and the planets spinning and hurdy-gurdies in June.

I sat grimly by Joan's side on the pilot dais, setting my teeth as I gripped the atomotor controls and stared out through the quartz port. We were plummeting downward with dizzying speed. Outside the quartz port there was a continuous misty glimmering splotched with nebulously weaving spirals of flame.

We were already far below Jupiter's outer envelope of tenuous gases in turbulent flux, and had entered a region of pressure drifts which caused our little vessel to twist and lunge erratically. Wildly it swept from side to side, its gyrations increasing in violence as I cut the atomotor blasts and released a traveling force field of repulsive negrations.

I thanked our lucky stars that the gravity tug had spared the atomotors and the landing mechanism. We hadn't anything else to be thankful for. I knew that if we plunged into a lake of fire even the cushioning force field couldn't save us.

Joan seemed not to care. She was staring through the quartz port in an attitude of intense absorption, a faint smile on her lips. There are degrees of recklessness verging on insanity; of courage which deserves no respect.

I had an impulse to shake her, and shout: "Do you realize we're plunging to our death?" I had to keep telling myself that she was still a child with no realization of what death meant. She simply couldn't visualize extinction; the dreadful blackness sweeping in—

Our speed was decreasing now. The cushioning force field was slowing us up, forcing the velocity needle sharply downward on the dial.

Joan swung toward me, her face jubilant. "We'll know in a minute, Richard. We're only eight thousand miles above the planet's crust."

"Crust?" I flung at her. "You mean a roaring furnace."

"No, Richard. If Jupiter were molten we'd be feeling it now. The plates would be white-hot."

It was true, of course. I hadn't realized it before. I wiped sweat from my forehead, and stared at her with sombre respect. She had been right for once. In her girlish folly she had out-guessed all the astronomers on Earth.

The deceleration was making my temples throb horribly. We were decelerating far too rapidly, but it was impossible to diminish the speed-retarding pressure of the force field, and I didn't dare resort to another atomotor charge so close to the planet's surface. To make matters worse, the auxiliary luminalis blast tubes had been crippled by the arrest of the force current, along with the almost indispensable gravity stabilizers.

The blood was draining from my brain already. I knew that I was going to lose consciousness, and my fingers passed swiftly up and down the control panel, freezing the few descent mechanisms which were not dependent on the interior force current in positions of stability and maximum effectiveness, and cupping over the meteor collision emergency jets.

Joan was the first to collapse. She had been quietly assisting me, her slim hands hovering over the base of the instrument board. Suddenly as we manipulated dials and rheostats she gave a little, choking cry and slumped heavily against me.

There was a sudden increase of tension inside my skull. Pain stabbed at my temples and the control panel seemed to waver and recede. I threw my right arm about Joan and tried to prevent her sagging body from slipping to the floor. A low, vibrant hum filled the chamber. We rocked back and forth before the instrument board, our shoulders drooping.

We were still rocking when a terrific concussion shook the ship, hurling us from the dais and plunging the chamber into darkness.

Bruised and dazed, I raised myself on one elbow and stared about me. The jarred fluorescent cubes had begun to function again, filling the pilot chamber with a slightly diminished radiance. But the chamber was in a state of chaos. Twisted coils of *erillium* piping lay at my feet, and an overturned jar of sluice lubricant was spilling its sticky contents over the corrugated metal floor.

Joan had fallen from the pilot dais and was lying on her side by the quartz port, her face ashen, blood trickling from a wound in her cheek. I pulled myself toward her, and lifted her up till her shoulders were resting on my knees. Slowly her eyes blinked open, and bored into mine.

She forced a smile. "Happy landing?" she inquired.

"Not so happy," I muttered grimly. "You were right about Jupiter. It's a solid world and we've landed smack upon it with considerable violence, judging from the way things have been hurled about."

"Then the cushioning force field—"

"Oh, it cushioned us, all right. If it hadn't we'd be roasting merrily inside a twisted mass of wreckage. But I wouldn't call it happy landing. You've got a nasty cut there."

"I'm all right, Richard."

Joan reached up and patted my cheek. "Good old Richard. You're just upset because we didn't plunge into a lake of molten zinc."

"Sure, that's it," I grunted. "I was hoping for a swift, easy out."

"Maybe we'll find it, Richard," she said, her eyes suddenly serious. "I'm not kidding myself. I know what a whiff of absolute zero can do to mucous membranes. All I'm claiming is that we've as good a chance here as we would have had on Ganymede."

"I wish I could feel that way about it. How do we know the atomotors can lift us from a world as massive as Jupiter?"

"I think they can, Richard. We had twelve times as much acceleration as we needed on tap when we took off from Earth."

She was getting to her feet now. Her eyes were shining again, exultantly. You would have thought we were descending in a stratoplane above the green fields of Earth.

"I've a confession to make, Richard," she grinned. "Coming down, I was inwardly afraid we *would* find ourselves in a ghastly bubble and boil. And I was seriously wondering how long we could stand it."

"Oh, you were."

"Longer than you think, Richard. Did you know that human beings can stand simply terrific heat? Experimenters have stayed in rooms artificially heated to a temperature of four hundred degrees for as long as fifteen minutes without being injured in any way."

"Very interesting," I said. "But that doesn't concern us now. We've got to find out if our crewmen are injured or badly shaken up. Chances are they'll be needing splints. And we've got to check the atmosphere before we can think of going outside, even with our helmets clamped down tight.

"Chances are it's laden with poisonous gases which the activated carbon in our oxygen filters won't absorb. If the atmosphere contains phosgene we'll not be stepping out. I'm hoping we'll find only carbon monoxide and methane."

"Nice, harmless gases."

"I didn't say that. But at least they'll stick to the outside of the particles of carbon in the filter and not tear our lungs apart."

"A thought, Richard. Suppose we find nickel carbonyl. That's harmless until it is catalyzed by carbon. Then it's worse than phosgene."

"There are lots of deadly ingredients we *could* find," I admitted with some bitterness. "Gases in solid toxic form—tiny dust granules which would pass right through the filters into our lungs. Jupiter's atmosphere may well be composed entirely of gases in solid phase."

"Let's hope not, Richard."

"We've been talking about lung corrosives," I said, relentlessly. "But our space suits are not impermeable, you know. There are gases which injure the skin, causing running sores. Vesicant gases. The fact that there are no vesicants on Io and Europa doesn't mean we won't encounter them here. And there are nerve gases which could drive us mad in less time than it takes to—"

"Richard, you always were an optimist."

I stared at her steadily for an instant; then shrugged. "All right, Joan. I hope you won't fall down on any of the tests. We've got to project an ion detector, a barometer and a moist cloud chamber outside the ship through a vacuum suction lock, in addition to the atmosphere samplers. And we've got to bandage that face wound before you bleed to death."

CHAPTER III
WHAT THE CAMERA SHOWED

A half hour later we had our recordings. Joan sat facing me on the elevated pilot dais, her head swathed in bandages. Dawson and the two other members of our crew stood just beneath us, their faces sombre in the cube-light.

They had miraculously escaped injury, although Dawson had a badly shaken up look. His hair was tousled and his jaw muscles twitched. Dawson was fifty-three years old, but the others were still in their early twenties—stout lads who could take it.

The fuel unit control pilot, James Darnel, was standing with his shoulders squared, as though awaiting orders. I didn't want to take off. I had fought Joan all the way, but now that we were actually on Jupiter I wanted to go out with her into the unknown, and stand with her under the swirling, star-concealing mist.

I wanted to be the first man to set foot on Jupiter. But I knew now that the first man would be the last. The atmospheric recordings had revealed that there were poisons in Jupiter's lethal cloud envelope which would have corroded our flesh through our space suits and burned out our eyes.

Joan had been compelled to bow to the inevitable. Bitterly she sat waiting for me to give the word to take off. I was holding a portable horizon camera in my hand. It was about the smallest, most incidental article of equipment we had brought along.

The huge, electro-shuttered horizon camera which we had intended to use on Ganymede had been so badly damaged by the jar of our descent that it was useless now. We had projected the little camera by a horizontal extension tripod through a vacuum suction lock and let it swing about.

I didn't expect much from it. It was equipped with infra-red and ultra-violet ray filters, but the atmosphere was so dense outside I didn't think the sensitive plates would depict anything but swirling spirals of mist.

I was waiting for the developing fluid to do its work before I broke the camera open and removed the plates. We had perhaps one chance in ten of getting a pictorial record of Jupiter's topographical features.

I knew that one clear print would ease Joan's frustration and bitterness, and give her a sense of accomplishment. But I didn't expect anything sensational. Venus is a frozen wasteland from pole to pole, and the dust-bowl deserts of Mars are exactly like the more arid landscapes of Earth.

Most of Earth is sea and desert and I felt sure that Jupiter would exhibit uniform surface features over nine-tenths of its crust. Its rugged or picturesque regions would be dispersed amidst vast, dun wastes. The law of averages was dead against our having landed on the rim of some blue-lit, mysterious cavern measureless to man, or by the shores of an inland sea.

But Joan's eyes were shining again, so I didn't voice my misgivings. Joan's eyes were fastened on the little camera as though all her life were centered there.

"Well, Richard," she urged.

My hands were shaking. "A few pictures won't give *me* a lift," I said. "Even if they show mountains and crater-pits and five hundred million people gape at them on Earth."

"Don't be such a pessimist, Richard. We'll be back in a month with impermeable space suits, and a helmet filter of the Silo type. You're forgetting we've accomplished a lot. It's something to know that the temperature outside isn't anything like as ghastly as the cold of space, and that the pebbles we've siphoned up show Widman-statten lines and contain microscopic diamonds. That means Jupiter's crust isn't all volcanic ash. There'll be something more interesting than tumbled mounds of lava awaiting us when we come back. If we can back our geological findings with prints—"

"You bet we can," I scoffed. "I haven't a doubt of it. What do you want to see? Flame-tongued flowers or gyroscopic porcupines? Take your choice. Richard the Great never fails."

"Richard, you're talking like that to hide something inside you that's all wonder and surmise."

Scowling, I broke open the camera and the plates fell out into my hand. They were small three by four inch positive transparencies, coated on one side with a iridescent emulsion which was still slightly damp.

Joan's eyes were riveted on my face. She seemed unaware of the presence of the crewmen below us. She sat calmly watching me as I picked up the top-most plate and held it up in the cube-light.

I stared at it intently. It depicted—a spiral of mist. Simply that, and nothing more. The spiral hung in blackness like a wisp of smoke, tapering from a narrow base.

"Well?" said Joan.

"Nothing on this one," I said, and picked up another. The spiral was still there, but behind it was something that looked like an ant-hill.

"Thick mist getting thinner," I said.

The third plate gave me a jolt. The spiral had become a weaving ghost shroud above a distinct elevation that could have been either a mountain or an ant-hill. It would have been impossible to even guess at the elevation's distance from the ship if something hadn't seemed to be crouching upon it.

The mist coiled down over the thing and partly obscured it. But enough of it was visible to startle me profoundly. It seemed to be crouching on the summit of the elevation, a wasplike thing with wiry legs and gauzy wings standing straight out from its body.

My fingers were trembling so I nearly dropped the fourth plate. On the fourth plate the thing was clearly visible. The spiral was a dispersing ribbon of mist high up on the plate and the mound was etched in sharp outlines on the emulsion.

The crouching shape was unmistakably wasplike. It stood poised on the edge of the mound, its wings a vibrating blur against the amorphously swirling mist.

From within the mound a companion shape was emerging. The second "wasp" was similar to the poised creature in all respects, but its wings did not appear to be vibrating and from its curving mouth-parts there dangled threadlike filaments of some whitish substance which was faintly discernible against the mist.

The fifth and last plate showed both creatures poised as though for flight, while something that looked like the head of still another wasp was protruding from the summit of the mound.

I passed the plates to Joan without comment. Wonder and exaltation came into her face as she examined them, first in sequence and then haphazardly, as though unable to believe her eyes.

"*Life*," she murmured at last, her voice tremulous with awe. "*Life on Jupiter.* Richard, it's—unbelievable. This great planet that we thought was a seething cauldron is actually inhabited by—*insects*."

"I don't think they're insects, Joan," I said. "We've got to suspend judgment until we can secure a specimen and study it at close range. It's an obligation we owe to our sponsors and—to ourselves. We're here on a mission of scientific exploration. We didn't inveigle funds from the Smithsonian so that we could rush to snap conclusions five hundred million miles from Earth.

"*Insectlike* would be a safer word. I've always believed that life would evolve along parallel lines throughout the entire solar system, assuming that it could exist at all on Venus, Mars, or on one of the outer planets. I've always believed that any life sustaining environment would produce forms familiar to us. On Earth you have the same adaptations occurring again and again in widely divergent species.

"There are lizards that resemble fish and fish that are lizardlike. The dinosaur Triceratops resembled a rhinoceros, the duck-billed platypus a colossal. Porpoises and whales are so fishlike that no visitor from space would ever suspect that they were mammals wearing evolutionary grease paint. And some of the insects look just like crustaceans, as you know.

"These creatures *look* like insects, but they may not even be protoplasmic in structure. They may be composed of some energy-absorbing mineral that has acquired the properties of life."

Joan's eyes were shining. "I don't care what they're composed of, Richard. We've got to capture one of those creatures alive."

I shook my head. "Impossible, Joan. If the air outside wasn't poisonous I'd be out there with a net. But there are limits to what we can hope to accomplish on this trip."

"We've siphoned up specimens of the soil," Joan protested. "What's to stop us from trying to catch up one of them in a suction cup?"

"You're forgetting that suction cups have a diameter of scarcely nine inches," I said. "These creatures may be as huge as the dragonflies of the Carboniferous Age."

"Richard, we'll project a traveling suction cup through one of the vacuum locks and try to—"

Her teeth came together with a little click. Startled, I turned and stared at her. Despite her elation she had been sitting in a relaxed attitude, with her back to the control panel and her latex taped legs extended out over the dais. Now she was sitting up straight, her face deathly pale in the cube-light.

The creatures were standing a little to the right of the rigidly staring crewmen, their swiftly vibrating wings enveloped in a pale bluish radiance which swirled upward toward the ribbed metal ceiling of the pilot chamber.

The creature was standing, wings swiftly vibrating, enveloped in a pale, bluish radiance.

Enormous they were—and unutterably terrifying with their great, many-faceted eyes fastened in brooding malignance upon us.

Joan and I arose simultaneously, drawn to our feet by a horror such as we had never known. A sense of sickening unreality gripped me, so that I could neither move nor cry out.

Dawson alone remained articulate. He raised his arm and pointed, his voice a shrill bleat.

"Look out, sir! Look out! There's another one coming through the wall directly behind you."

The warning came too late. As I swung toward the quartz port I saw Joan's arm go out, her body quiver. Towering above her was a third gigantic shape, the tip of its abdomen resting on her shoulders, its spindly legs spread out over the pilot dais.

As I stared at it aghast it shifted its bulk, and a darkly gleaming object that looked like a shrunken bean-pod emerged from between Joan's shoulder blades.

Joan moaned and sagged on the dais, her hands going to her throat. Instantly the wasp swooped over me, its abdomen descending. For an awful instant I could see only a blurred shapelessness hovering over me.

Then a white-hot shaft of pain lanced through me and the blur receded. But I was unable to get up. I was unable to move or think clearly. My limbs seemed weighted. I couldn't get up or help Joan or even roll over.

My head was bursting and my spine was a board. I must have tried to summon help, for I seem to remember Dawson sobbing: "I'm paralyzed too, sir," just before my senses left me and I slumped unconscious on the dais.

How long I remained in blackness I had no way of knowing. But when I opened my eyes again I was no longer on the dais. I was up under the ceiling of the pilot chamber, staring down at the corrugated floor through what looked like a glimmering, whitish haze.

Something white and translucent wavered between my vision and the floor, obscuring the outlines of the great wasps standing there.

There were five wasps standing directly beneath me in the center of the pilot chamber, their wings a luminous blur in the cube-light.

My perceptions were surprisingly acute. I wasn't confused mentally, although my mouth felt parched and there was a dull, throbbing ache in my temples.

The position in which I found myself and the whitish haze bewildered me for only an instant. I knew that the "haze" was a web the instant I studied its texture. And when I tried to move and couldn't the truth dawned in all its horror.

I was suspended beneath the ceiling of the chamber in a translucent, hammock-like web. I was lying on my stomach, my limbs bound by fibrous strands as resistant as whipcords.

Minutes which seemed like eternities passed as I lay there with fear clutching at my heart. I could only gaze downward. The crewmen had vanished and the wasps were standing like grim sentinels in front of the control panel.

I was almost sure that Joan and the crewmen were suspended in similar webs close to me. I thought I knew what the wasps had done to us.

I had talked to Joan about life evolving along parallel lines throughout the Solar System, but I hadn't expected to encounter life as strange and frightening as this—insectlike, and yet composed of some radiant substance that could penetrate solid metal and flow at will through the walls of a ship.

Some radiant substance that had weight and substance and could touch human flesh without searing it. Nothing so ghastly strange and yet—indisputably the creatures were wasplike. And being wasplike their habit patterns were similar to those of so-called social wasps on Earth.

Social wasps sting caterpillars into insensibility, and deposit eggs in their paralyzed flesh. When the wasp-grubs hatch they become ghoulish parasites, gruesomely feasting until the caterpillars dwindle to repulsive, desiccated husks.

CHAPTER IV
EDDINGTON'S OSCILLATIONS

Horror and sick revulsion came into me as I stared down at the great wasps, with their many-faceted eyes seeming to probe the Jovian mists through a solid metal bulkhead!

They thought we were Jovian caterpillars! Evidently there were flabby, white larva-shapes out in the mist as large as men—with the habit perhaps of rearing upright on stumpy legs like terrestrial measuring worms. We looked enough like Jovian caterpillars to deceive those Jovian wasps.

They had apparently seen us through the walls of the ship, and their egg-laying instincts had gone awry. They had plunged ovipositors into our flesh, spun webs about us and hung us up to dry out while their loathsome progeny feasted on our flesh.

The whitish substance exuding from the mouth-parts of one of the photographed wasps had evidently been mucilaginous web material.

There was no other possible explanation. And suddenly as I lay there with thudding temples something occurred which increased my horror ten-fold.

Zigzagging, luminous lines appeared on the ribbed metal wall opposite the quartz port and a wasp materialized amidst spectral bands of radiance which wavered and shimmered like heat waves in bright sunlight.

A coldness itched across my scalp. Dangling from the wasp's right fore-leg was the web-enmeshed form of the fuel unit control pilot. Young Darnel's hair was tousled, and his metacloth pilot tunic had been partly torn away, leaving his ribs exposed.

I had never seen anything quite so horrible. Embedded in Darnel's flesh was a huge, faintly luminous grub, its rudimentary mouth-parts obscurely visible beneath the drum-tight skin over his breastbone.

His hands closed and unclosed as I stared down at him. His forehead was drenched with sweat and he writhed as though in unbearable anguish, a hectic flush suffusing his cheeks.

My throat felt hot and swollen but I managed to whisper: "Darnel. Darnel, my lad."

Slowly his eyelids flickered open and he stared up at me, a grimace of agony convulsing his haggard features.

"Nothing seems quite real, sir," he groaned. "Except—the pain."

"Is it very bad?"

"I'm in agony, sir. I can't stand it much longer. It's as though a heated iron were resting on my chest."

"Where did that wasp take you?"

"Into the chart room, sir. When I struggled in the web it carried me into the chart room and stung me again."

I swallowed hard. "Did you experience any pain before that, lad?"

"I felt a stab the first time it plunged its stinger into me, but when I came to in the web there was no pain. The pain started in the chart room."

I was thinking furiously. Stinger—ovipositor. A few species of stinging terrestrial insects possessed organs which combined the functions of both. Evidently the wasps had simply stung us at first—to paralyze us. Now they were completing the gruesome process of providing a feast for their avaricious progeny. One of the wasps had taken Darnel from the web, and deposited a fertile, luminous egg in his flesh.

It was becoming hideously clear now. The wasp's retreat into the chart room had been motivated by a desire to complete its loathsome task in grim seclusion. It had withdrawn a short distance for the sake of privacy, passing completely through the wall out of sight.

My stomach felt tight and hollow when I contemplated the grub, which had apparently hatched out almost instantly. It seemed probable that Darnel's anguish was caused by the grub's luminosity searing his flesh, as its mouth-parts were still immobile.

"Darnel," I whispered. "The paralysis wore off. They couldn't sting us into permanent insensibility. The pain may go too."

He looked at me, his eyes filming. "I don't understand, sir. Paralysis?"

I had forgotten that Darnel wasn't even aware of what we were up against. He couldn't see the grub. He didn't know that we were—caterpillars.

He was in torment, and I was powerless to help him. I was glad he didn't know, despite my certain knowledge that I was about to share his fate. I whispered hoarsely: "Can you see Joan, lad. Is she—"

"She's lying in the web next to you, sir. Dawson and Stillmen have been out."

"*Taken out.*"

"There are two empty webs, sir. Oh, God, the pain—I can't stand it."

The great wasp was moving now. It was moving slowly across the chamber toward the quartz port, between its motionless companions. Its wings were vibrating and it was raising Darnel up as though it were about to hurl him out through the inches-thick quartz into the mist.

Suddenly as I stared the utter strangeness of something that had already occurred smote me with the force of a physical blow. The wasp had carried Darnel *right through the wall*—from the pilot chamber to the chart room, and back again.

Apparently the great wasps could make us tenuous too! Close and prolonged contact with the energies pouring from them had made Darnel's body as permeable as gamma light. Horribly it was borne in on me that Darnel's anguish was caused by a *pervasive* glow which enveloped him from head to foot. It was fainter than the radiance which poured from the wasps and was almost invisible in the fluorescent cube-light, but I could see it now.

The wasp didn't hurl Darnel out. It simply vanished with him through the quartz port, its wings dwindling to a luminous blur which hovered for an instant before the inches-thick crystal before it dwindled into nothingness.

The same instant a voice beside me moaned. "Richard, I can't move."

"Joan," I gasped. "Oh, my dearest—"

"Richard, I can't move. I'm in a sort of web, Richard. It's—it's like a mist before my eyes."

I knew then that Joan was trussed up on her side, gazing through her web directly at me. I was glad that she couldn't see the wasps.

"Joan."

"Yes, Richard."

"Did you just wake up?"

"Wake up? You mean I've been dreaming, Richard. Those wasps—"

"Darling, do you want it straight?"

"You don't need to ask that, Richard."

I told her then—everything I suspected, everything I *knew*. When I stopped speaking, she was silent for ten full seconds. Then her voice came to me vibrant with courage.

"We can't live forever, Richard."

"That's what I've been thinking, darling. And you've got to admit we've had the best of everything."

"Some people I know would call it living," she said.

"Darling?"

"Yes, Richard."

"I've a confession to make. I've liked being out in space with you. I've liked the uncertainty, the danger—the desperate chances we both took with our lives."

"I'm glad, Richard."

"I don't glow outwardly—you know that. You've had a lot to contend with. I've reproached you, and tried to put a damper on your enthusiasm, and—"

"You've been a wonderful husband, Richard."

"But as a lover—"

"Richard, do you remember what you said to me when we were roaring through the red skies above Io? You held my fingers so tightly I was afraid you'd break them, and your kisses were as fiery as a girl could ask for. And you said I reminded you of someone you'd always loved, and that was why you'd married me.

"And when I scowled and asked her name you said she had no name and had never existed on Earth. But that I had her eyes and hair and thoughts, and was just as slim, and that when I walked I reminded you of her, and even when I just sat on the pilot dais staring out into space.

"I knew then that you had always been in love with love, and that means everything to a woman."

"I didn't do so badly then?"

"Richard, you've never done badly at any time. Do you think I could love a man who was all flattery and blather?"

"I've always loved you, Joan."

"I know, Richard my darling."

"If only it didn't have to end."

"It will be over swiftly, dearest. They'll take us out into the mist and into one of their nests, but we'll be beyond pain ten seconds after the atmosphere enters our lungs. Darnel and Dawson are at peace now."

"But we could have gone on, and—" I broke off in stunned bewilderment.

The vibrating wings of the wasps beneath me seemed to be casting less massive shadows on the walls of the pilot chamber. The wasps themselves seemed to be—

My heart gave a sudden, violent leap. For perhaps ten seconds utter incredulity enveloped me. Unmistakably the wasps had grown smaller, dimmer.

Even as I stared they continued to dwindle, shedding their awesome contours and becoming no larger than ourselves.

"Good God!" I exclaimed.

"Richard, what is it?"

"The wasps, Joan. They're getting smaller!"

"Richard, you're either stark, raving mad, or your vision is swimming from the strain of watching them."

"No, Joan. I'm quite sane, and my eyes are all right. I tell you, they're shrinking."

"Richard, how *could* they shrink?"

"I—I don't know. Perhaps—wait a minute, Joan. *Eddington's oscillations.*"

"Eddington's *what*?"

"Oscillations," I exclaimed, excitedly. "A century ago Eddington pictured all matter throughout the universe as alternating between a state of contraction and expansion. Oh, Joan, don't you see? These creatures are composed not of solid matter, but of some form of vibrating energy. They possess an oscillatory life cycle which makes them contract and expand in small-scale duplication of the larger pulse of our contracting and expanding universe. They become huge, then small, then huge again. They may expand and contract a thousand times before they die. Perhaps they—"

A scream from Joan cut my explanation short. "Richard, the web's slackening. I'm going to fall."

Fifteen minutes later we were rocketing upward through Jupiter's immense cloud blanket, locked in each other's arms.

Joan was sobbing. "It's unbelievable, Richard. We were saved by—by a miracle."

"No, Joan—Eddington's oscillations. Although I'll admit it seemed like a miracle when those tiny wasps became frightened by enormous *us* descending upon them, and flew straight through the quartz port into the mist."

"What do you suppose made the web slacken?"

"Well," I said. "That web was spun out of the bodies of those dwindling wasps. It seems to have been a sort of energy web, since it shriveled to a few charred fibers before we could pluck it from our tunics. Apparently it was

sustained by energies emanating from the wasps which burned out the instant the wasps dwindled."

"Richard, hold me close. I thought we would never see Earth again."

"I'm not sure that we will," I warned her. "We've lost our crew and we can't even set our course by the stars. Perhaps the direction gauges will function again when the atomotors carry us beyond Jupiter's orbit, but I wouldn't bank on it."

"Oh, Richard, how could you? You said you liked uncertainty, danger. You said—"

"Never mind what I said. I'm just being realistic, that's all. Do you realize how heavily the cards are stacked against us?"

"No, and I don't particularly care. Kiss me, Richard."

Grumblingly I obeyed. It would have been better if we could have saved our energies for the grim ordeal ahead of us, but it was impossible to reason with Joan when she was in one of her reckless moods.

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