

Hide and Seek

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We were walking back through the woods when Kingman saw the gray squirrel. Our bag was a small but varied one -three grouse, four rabbits (one, I am sorry to say, an infant in arms) and a couple of pigeons. And contrary to certain dark forecasts, both the dogs were still alive.

The squirrel saw us at the same moment. It knew that it was marked for immediate execution as a result of the damage it had done to the trees on the estate, and perhaps it had lost close relatives to Kingman's gun. In three leaps it had reached the base of the nearest tree, and vanished behind it in a flicker of gray . We saw its face once more, appearing for a moment round the edge of its shield a dozen feet from the ground; but though we waited, with guns leveled hopefully at various branches, we never saw it again.

Kingman was very thoughtful as we walked back across the lawn to the magnificent old house. He said nothing as we handed our victims to the cook-who received them without much enthusiasm-and only emerged from his reverie when we were sitting in the smoking room and he remembered his duties as a host.

"That tree-rat," he said suddenly (he always called them "tree rats," on the grounds that people were too sentimental to shoot the dear little squirrels), "it reminded me of a very peculiar experience that happened shortly before I retired. Very shortly indeed, in fact."

"I thought it would," said Carson dryly. I gave him a glare: he'd been in the Navy and had heard Kingman's stories before, but they were still new to me.

"Of course," Kingman remarked, slightly nettled, "if you'd rather I didn't . . ."

"Do go on," I said hastily. "You've made me curious. What connection there can possibly be between a gray squirrel and the Second Jovian War I can't imagine. "

Kingman seemed mollified.

"I think I'd better change some names," he said thoughtfully, "but I won't alter the places. The story begins about a million kilometers sunward of Mars . . ."

K.15 was a military intelligence operative. It gave him considerable pain when unimaginative people called him a spy, but at the moment he had much more substantial grounds for complaint. For some days now a fast enemy cruiser had been coming up astern, and though it was flattering to have the undivided attention of such a fine ship and so many highly trained men, it was an honor that K.15 would willingly have forgone.

What made the situation doubly annoying was the fact that his friends would be meeting him off Mars in about twelve hours, aboard a ship quite capable of dealing with a mere cruiser—from which you will gather that K.15 was a person of some importance. Unfortunately, the most optimistic calculation showed that the pursuers would be within accurate gun range in six hours. In some six hours five minutes, therefore, K.15 was likely to occupy an extensive and still expanding volume of space.

There might just be time for him to land on Mars, but that would be one of the worst things he could do. It would certainly annoy the aggressively neutral Martians, and the political complications would be frightful. Moreover, if his friends had to come down to the planet to rescue him, it would cost them more than ten kilometers a second in fuel—most of their operational reserve.

He had only one advantage, and that a very dubious one. The commander of the cruiser might guess that he was heading for a rendezvous, but he would not know how close it was or how large was the ship that was coming to meet him. If he could keep alive for only twelve hours, he would be safe. The "if" was a somewhat considerable one.

K.15 looked moodily at his charts, wondering if it was worthwhile to burn the rest of his fuel in a final dash. But a dash to where? He would be completely helpless then, and the pursuing ship might still have enough in her tanks to catch him as he flashed

outward into the empty darkness, beyond all hope of rescue—passing his friends as they came sunward at a relative speed so great that they could do nothing to save him.

With some people, the shorter the expectation of life, the more sluggish are the mental processes. They seem hypnotized by the approach of death, so resigned to their fate that they do nothing to avoid it. K.15, on the other hand, found that his mind worked better in such a desperate emergency. It began to work now as it had seldom done before.

Commander Smith—the name will do as well as any other—of the cruiser Doradus was not unduly surprised when K.15 began to decelerate. He had half expected the spy to land on Mars, on the principle that internment was better than annihilation, but when the plotting room brought the news that the little scout ship was heading for Phobos, he felt completely baffled. The inner moon was nothing but a jumble of rock some twenty kilometers across, and not even the economical Martians had ever found any use for it. K.15 must be pretty desperate if he thought it was going to be of any greater value to him.

The tiny scout had almost come to rest when the radar operator lost it against the mass of Phobos. During the braking maneuver, K.15 had squandered most of his lead and the Doradus was now only minutes away—though she was now beginning to decelerate lest she overrun him. The cruiser was scarcely three thousand kilometers from Phobos when she came to a complete halt: of K.15's ship, there was still

no sign. It should be easily visible in the telescopes, but it was probably on the far side of the little moon.

It reappeared only a few minutes later, traveling under full thrust on a course directly away from the sun. It was accelerating at almost five gravities-and it had broken its radio silence. An automatic recorder was broadcasting over and over again this interesting message:

"I have landed on Phobos and am being attacked by a Z-class cruiser. Think I can hold out until you come, but hurry."

The message wasn't even in code, and it left Commander Smith a sorely puzzled man. The assumption that K. 15 was still aboard the ship and that the whole thing was a ruse was just a little too naive. But it might be a double-bluff: the message had obviously been left in plain language so that he would receive it and be duly

confused. He could afford neither the time nor the fuel to chase the scout if K. 15 really had landed. It was clear that reinforcements were on the way, and the sooner he left the vicinity the better. The phrase "Think I can hold out until you come" might be a piece of sheer impertinence, or it might mean that help was very near indeed.

Then K.15's ship stopped blasting. It had obviously exhausted its fuel, and was doing a little better than six kilometers a second away from the sun. K.15 must have landed, for his ship was now speeding helplessly out of the solar system. Commander Smith didn't like the message it was broadcasting, and guessed that it was running into the track of an approaching warship at some indefinite distance, but there was nothing to be done about that. The Doradus began to move toward Phobos , anxious to waste no time.

On the face of it, Commander Smith seemed the master of the situation. His ship was armed with a dozen heavy guided missiles and two turrets of electro-magnetic guns. Against him was one man in a space-suit, trapped on a moon only twenty kilometers across. It was not until Commander Smith had his first good look at Phobos , from a distance of less than a hundred kilometers , that he began to realize that, after all, K. 15 might have a few cards up his sleeve.

To say that Phobos has a diameter of twenty kilometers , as the astronomy books invariably do, is highly misleading. The word "diameter" implies a degree of symmetry which Phobos most certainly lacks. Like those other lumps of cosmic slag, the asteroids, it is a shapeless mass of rock floating in space with, of course, no hint of an atmosphere and not much more gravity. It turns on its axis once every seven hours thirty-nine minutes, thus keeping the same face always to Mars-which is so close that appreciably less than half the planet is visible, the poles being below the curve of the horizon. Beyond this, there is very little more to be said about Phobos .

K. 15 had no time to enjoy the beauty of the crescent world filling the sky above him. He had thrown all the equipment he could carry out of the airlock, set the controls, and jumped. As the little ship went flaming out toward the stars he watched it go with feelings he did not care to analyze. He had burned his boats with a vengeance, and he could only hope that the oncoming battleship would intercept the radio message as the empty vessel went racing

by into nothingness. There was also a faint possibility that the enemy cruiser might be in pursuit, but that was rather too much to hope for.

He turned to examine his new home. The only light was the ochre radiance of Mars, since the sun was below the horizon, but that was quite sufficient for his purpose and he could see very well. He stood in the center of an irregular plain about two kilometers across, surrounded by low hills over which he could leap rather easily if he wished. There was a story he remembered reading long ago about a man who had accidentally jumped off Phobos : that wasn't quite possible-though it was on Deimos -as the escape velocity was still about ten meters a second. But unless he was careful, he might easily find himself at such a height that it would take hours to fall back to the surface-and that would be fatal. For K. 15's plan was a simple one: he must remain as close to the surface of Phobos as possible-and diametrically opposite the cruiser. The Doradus could then fire all her armament against the twenty kilometers of rock, and he wouldn't even feel the concussion. There were only two serious dangers, and one of these did not worry him greatly.

To the layman, knowing nothing of the finer details of astronautics, the plan would have seemed quite suicidal. The Doradus was armed with the latest in ultra-scientific weapons: moreover, the twenty kilometers which separated her from her prey represented less than a second's flight at maximum speed. But Commander Smith knew better, and was already feeling rather unhappy. He realized, only too well, that of all the machines of transport man has ever invented, a cruiser of space is far and away the least maneuverable . It was a simple fact that K. 15 could make half a dozen circuits of his little world while her commander was persuading the Doradus to make even one.

There is no need to go into technical details, but those who are still unconvinced might like to consider these elementary facts. A rocket-driven spaceship can, obviously, only accelerate along its major axis-that is, "forward." Any deviation from a straight course demands a physical turning of the ship, so that the motors can blast in another direction. Everyone knows that this is done by internal gyros or tangential steering jets, but very few people know just how long this simple maneuver takes. The average cruiser, fully fueled ,

has a mass of two or three thousand tons, which does not make for rapid footwork. But things are even worse than this, for it isn't the mass, but the moment of inertia that matters here-and since a cruiser is a long, thin object, its moment of inertia is slightly colossal. The sad fact remains (though it is seldom mentioned by astronautical engineers) that it takes a good ten minutes to rotate a spaceship through 180 degrees, with gyros of any reasonable size. Control jets aren't much quicker, and in any case their use is restricted because the rotation they produce is permanent and they are liable to leave the ship spinning like a slow-motion pinwheel, to the annoyance of all inside.

In the ordinary way, these disadvantages are not very grave. One has millions of kilometers and hundreds of hours in which to deal with such minor matters as a change in the ship's orientation. It is definitely against the rules to move in ten- kilometerradius circles, and the commander of the Doradus felt distinctly aggrieved, K. 15 wasn't playing fair.

At the same moment that resourceful individual was taking stock of the situation, which might very well have been worse. He had reached the hills in three jumps and felt less naked than he had out in the open plain. The food and equipment he had taken from the ship he had hidden where he hoped he could find it again, but as his suit could keep him alive for over a day that was the least of his worries. The small packet that was the cause of all the trouble was still with him, in one of those numerous hiding places a well-designed space-suit affords.

There was an exhilarating loneliness about his mountain eyrie, even though he was not quite as lonely as he would have wished. Forever fixed in his sky, Mars was waning almost visibly as Phobos swept above

the night side of the planet. He could just make out the lights of some of the Martian cities, gleaming pin-points marking the junctions of the invisible canals. All else was stars and silence and a line of jagged peaks so close it seemed he could almost touch them. Of the Doradus there was still no sign. She was

presumably carrying out a careful telescopic examination of the Le: lighted side of Phobos .

Mars was a very useful clock: when it was half full the sun would rise and, very probably, so would the Doradus . But she might approach from some quite unexpected quarter: she might

even-and this was the one real danger-she might even have landed a search party.

This was the first possibility that had occurred to Commander Smith when he saw just what he was up against. Then he realized that the surface area of Phobos was over a thousand square kilometers and that he could not spare more than ten men from his crew to make a search of that jumbled wilderness. Also, K. 15 would certainly be armed.

Considering the weapons which the Doradus carried, this last objection might seem singularly pointless. It was very far from being so. In the ordinary course of business, side-arms and other portable weapons are as much use to a space-cruiser as are cutlasses and crossbows. The Doradus happened, quite by chance-and against regulations at that-to carry one automatic pistol and a hundred rounds of ammunition. Any search party would therefore consist of a group of unarmed men looking for a well concealed and very desperate individual who could pick them off at his leisure. K.15 was breaking the rules again.

The terminator of Mars was now a perfectly straight line, and at almost the same moment the sun came up, not so much like thunder as like a salvo of atomic bombs. K.15 adjusted the filters of his visor and decided to move. It was safer to stay out of the sunlight, not only because here he was less likely to be detected in the shadow but also because his eyes would be much more sensitive there. He had only a pair of binoculars to help him, whereas the Doradus would carry an electronic telescope of twenty centimeters aperture at least.

It would be best, K. 15 decided, to locate the cruiser if he could. It might be a rash thing to do, but he would feel much happier when he knew exactly where she was and could watch her movements. He could then keep just below the horizon, and the glare of the rockets would give him ample warning of any impending move . Cautiously launching himself along an almost horizontal trajectory, he began the circumnavigation of his world.

The narrowing crescent of Mars sank below the horizon until only one vast horn reared itself enigmatically against the stars. K. 15 began to feel worried: there was still no sign of the Doradus . But this was hardly surprising, for she was painted black as night and might be a good hundred kilometers away in space. He stopped,

wondering if he had done the right thing after all. Then he noticed that something quite large was eclipsing the stars almost vertically overhead, and was moving swiftly even as he watched. His heart stopped for a moment: then he was himself again, analyzing the situation and trying to discover how he had made so disastrous a mistake.

It was some time before he realized that the black shadow slipping across the sky was not the cruiser at all, but something almost equally deadly. It was far smaller, and far nearer, than he had at first thought. The Doradus had sent her television-homing guided missiles to look for him-

This was the second danger he had feared, and there was nothing he could do about it except to remain as inconspicuous as possible. The Doradus now had many eyes searching for him, but these auxiliaries had very severe limitations. They had been built to look for sunlit spaceships against a background of stars, not to search for a man hiding in a dark jungle of rock. The definition of their television systems was low, and they could only see in the forward direction.

There were rather more men on the chessboard now, and the game was a little deadlier, but his was still the advantage.

The torpedo vanished into the night sky. As it was traveling on a nearly straight course in this low gravitational field, it would soon be leaving Phobos behind, and K. 15 waited for what he knew must happen. A few minutes later, he saw a brief stabbing of rocket exhausts and guessed that the projectile was swinging slowly back on its course. At almost the same moment he saw another flare far away in the opposite quarter of the sky, and wondered just how many of these infernal machines were in action. From what he knew of Z-class cruisers—which was a good deal more than he should there were four missile-control channels, and they were probably all in use.

He was suddenly struck by an idea so brilliant that he was quite sure it couldn't possibly work. The radio on his suit was a tunable one, covering an unusually wide band, and somewhere not far away the Doradus was pumping out power on everything from a thousand megacycles upward. He switched on the receiver and began to explore.

It came in quickly—the raucous whine of a pulse transmitter

not far away. He was probably only picking up a sub-harmonic, but that was quite good enough. It D/F'd sharply, and for the first time K. 15 allowed himself to make long-range plans about the future. The Doradus had betrayed herself: as long as she operated her missiles, he would know exactly where she was.

He moved cautiously forward toward the transmitter. To his surprise the signal faded, then increased sharply again. This puzzled him until he realized that he must be moving through a diffraction zone. Its width might have told him something useful if he had been a good enough physicist, but he couldn't imagine what.

The Doradus was hanging about five kilometers above the surface, in full sunlight. Her "non-reflecting" paint was overdue for renewal, and K. 15 could see her clearly. As he was still in darkness, and the shadow line was moving away from him, he decided that he was as safe here as anywhere. He settled down comfortably so that he could just see the cruiser and waited, feeling fairly certain that none of the guided projectiles would come so near the ship. By now, he calculated, the commander of the Doradus must be getting pretty mad. He was perfectly correct.

After an hour, the cruiser began to heave herself round with all the grace of a bogged hippopotamus. K. 15 guessed what was happening. Commander Smith was going to have a look at the antipodes, and was preparing for the perilous fifty-kilometer journey. He watched very carefully to see the orientation the ship was adopting, and when she came to rest again was relieved to see that she was almost broadside on to him. Then, with a series of jerks that could not have been very enjoyable aboard, the cruiser began to move down to the horizon. K. 15 followed her at a comfortable walking pace—if one could use the phrase—reflecting that this was a feat very few people had ever performed. He was particularly careful not to overtake her on one of his kilometer-long glides, and kept a close watch for any missiles that might be coming up astern.

It took the Doradus nearly an hour to cover the fifty kilometers. This, as K. 15 amused himself by calculating, represented considerably less than a thousandth of her normal speed. Once she found herself going off into space at a tangent, and rather than waste time turning end over end again fired off a salvo of shells to reduce speed. But she made it at last, and K.15 settled down for another

vigil, wedged between two rocks where he could just see the cruiser and he was quite sure she couldn't see him. It occurred to him that by this time Commander Smith might have grave doubts as to whether he really was on Phobos at all, and he felt like firing off a signal flare to reassure him. However, he resisted the temptation.

There would be little point in describing the events of the next ten hours, since they differed in no important detail from those that had gone before. The Doradus made three other moves, and K.15 stalked her with the care of a big-game hunter following the spoor of some elephantine beast. Once, when she would have led him out into full sunlight, he let her fall below the horizon until he could only just pick up her signals. But most of the time he kept her just visible, usually low down behind some convenient hill.

Once a torpedo exploded some kilometers away, and K. 15 guessed that some exasperated operator had seen a shadow he didn't like-or else that a technician had forgotten to switch off a proximity fuse. Otherwise nothing happened to enliven the proceedings: in fact, the whole affair was becoming rather boring. He almost welcomed the sight of an occasional guided missile drifting inquisitively overhead, for he did not believe that they could see him if he remained motionless and in reasonable cover. If he could have stayed on the part of Phobos exactly opposite the cruiser he would have been safe even from these, he realized, since the ship would have no control there in the moon's radio-shadow. But he could think of no reliable way in which he could be sure of staying in the safety zone if the cruiser moved again.

The end came very abruptly. There was a sudden blast of steering jets, and the cruiser's main drive burst forth in all its power and splendor. In seconds the Doradus was shrinkingsunward, free at last, thankful to leave, even in defeat, this miserable lump of rock that had so annoyingly balked her of her legitimate prey. K. 15 knew what had happened, and a great sense of peace and relaxation swept over him. In the radar room of the cruiser, someone had seen an echo of disconcerting amplitude approaching with altogether excessive speed. K.15 now had only to switch on his suit beacon and to wait. He could even afford the luxury of a cigarette.

"Quite an interesting story," I said, "and I see now how it ties up with that squirrel. But it does raise one or two queries in my mind."

"Indeed?" said Rupert Kingman politely.

I always like to get to the bottom of things, and I knew that my host had played a part in the Jovian War about which he very seldom spoke. I decided to risk a long shot in the dark.

"May I ask how you happen to know so much about this unorthodox military engagement? It isn't possible, is it, that you were K. 15?"

There was an odd sort of strangling noise from Carson. Then Kingman said, quite calmly: "No, I wasn't."

He got to his feet and went off toward the gun room.

"If you'll excuse me a moment, I'm going to have another shot at that tree-rat. Maybe I'll get him this time." Then he was gone.

Carson looked at me as if to say: "This is another house you'll never be invited to again." When our host was out of earshot he remarked in a coldly cynical voice:

"You've done it. What did you have to say that for?"

"Well, it seemed a safe guess. How else could he have known all that?"

"As a matter of fact, I believe he met K. 15 after the War: they must have had an interesting conversation together. But I thought you knew that Rupert was retired from the service with only the rank of lieutenant commander. The Court of Inquiry could never see his point of view. After all, it just wasn't reasonable that the commander of the fastest ship in the Fleet couldn't catch a man in a