2001 AND BEYOND

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AND OTHERS

2001 and Beyond: Science Fiction Stories

by

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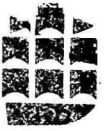

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STAR QUEEN
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Thirty Seconds—Thirty Days

ARTHUR C. CLARKE

In the control room of the *Star Queen*, Grant was writing his daily report when he heard the door opening behind him. He didn't look round—it was hardly necessary, for there was only one other man on board the spaceship. But when nothing happened, and when McNeil neither spoke nor came into the room, the long silence at last made Grant curious, and he swung his chair round.

McNeil was standing by the open door. He looked pale and frightened.

"What's the matter?" said Grant angrily. "Are you ill?"

The engineer shook his head. Grant noticed the little drops of sweat that broke away from McNeil's face and were flying across the room in perfectly straight lines. The man's throat moved, but for a while no sound came. He seemed to be about to cry.

"We're going to die," he whispered at last. "We've lost our extra oxygen* supply."

Then he did cry. He would have fallen down, but he could not fall in those conditions—he had no weight. So he just folded up as he floated.

Grant said nothing. Quite unconsciously, he crushed his lighted cigarette, using great force. Already he had the terrible feeling that the air was thickening around him. His throat tightened.

He slowly loosened the straps which, while he was seated, gave him some feeling of weight. Then, skilfully, he made

himself float over to the door. McNeil did not offer to follow. "He's had a terrible shock," Grant said to himself, "but he *is* behaving very badly." As he went past the engineer he hit him angrily, saying:

"Control yourself, man!"

Down below, there was a large room in the shape of a half circle. In the middle a thick post went from top to bottom: inside it were all the control wires which led to the other half of the spaceship. The *Star Queen* was shaped like a stick with a ball at each end.

The large room was full of boxes of every kind. But it was not at the boxes that Grant was looking. If they had all been missing he would scarcely have noticed. His eyes were on the big oxygen container, taller than himself, which was fastened to the wall.

It looked exactly the same as it had done when he had last seen it. Its grey paint shone and its metal sides were still cold and slightly wet. All its pipes seemed to be in perfect condition. There was no sign of anything wrong, apart from one small detail. The needle on the instrument that showed how much oxygen there was lay at zero.

Grant looked at this needle for several moments. Then he knocked half a dozen times on the glass, in case the needle had stuck—though he had no real hope. Bad news is always more easy to believe than good.

When Grant got back to the control room, McNeil was more calm. Grant saw that the door of the medicine cupboard was open, and he realized what McNeil had just been doing.

"I know what must have happened," the engineer said. "A meteor* must have hit us and made a hole in the oxygen-cooling tube."

Grant thought in silence for a moment. What had happened was serious—extremely serious—but might they not be able to stay alive? After all, the voyage was more than three-quarters over.

"Surely the air machine can keep the air inside the ship fit to breathe, even though it does become rather thick?" he asked

hopefully. "Doesn't the machine get back all the oxygen?"

McNeil shook his head. "No. Every time the used air goes through the air machine, there's a loss of ten per cent. That's why we have to have an extra supply of oxygen."

"The spacesuits!" cried Grant in sudden excitement. "What about *their* oxygen containers?"

"There's only enough oxygen in those for about thirty minutes," McNeil answered.

"There must be some way out of this situation!" said Grant. He was as much angry as frightened. He was angry with McNeil for having failed to control himself. He was angry with the engineers who had built the ship for not having planned for this extremely unlikely sort of accident.

The danger was great, and the men's situation most unfortunate. However, the worst was still many days away, perhaps, and a lot of things might happen before then. Certainly there was plenty of time to think—perhaps too much time.

The meteor which had struck the *Star Queen* was only a centimetre wide, and weighed ten grammes. Scientists—and insurance companies—expected such an accident to happen only once in three million years. It might never happen again in human history.

This knowledge did not, however, make Grant and McNeil any happier.

On this voyage the *Star Queen* had been travelling for a hundred and fifteen days and had only thirty still to go. She was going from near Earth to near Venus—on the opposite side of the Sun. The fast spaceships could travel from planet* to planet at three times her speed (using ten times as much fuel*), but she had to take a hundred and forty-five days, more or less, on each journey. And the fixed path she followed was long and curving.

The *Star Queen* was very different from twentieth century ideas of what a spaceship should look like. There were two unequal round shapes, joined by a straight one. The round ones were fifty metres and twenty metres wide. The long straight one was about a hundred metres long.

The larger ball contained the men and the controls—and also the boxes of goods which have already been mentioned. The smaller one contained the ship's engines: nobody was allowed to go near these.

The boxes of goods that the *Star Queen* carried from Earth to Venus were brought on board by smaller ships. In a month, other such ships would come up from Venus to meet her, but this time the *Star Queen* would not stop, for there would be no one at the controls.

Grant had fastened himself to his seat with straps and was trying to work out the exact facts of the situation. It is surprising how long it takes to add a few simple figures when your life depends on the answer. In the end he gave up hope that the total would change.

"I think we can last about twenty days," he said. "That means that we'll be ten days away from Venus when—" He broke off.

Ten days didn't sound much—but it might just as well have been ten years.

"If we threw out all those boxes of goods," said McNeil, "would we have a chance of changing to a straighter path to Venus?"

Grant shook his head. "I had hoped so," he replied, "but it won't work. We could reach Venus in a week if we wished—but we'd have no fuel for reducing speed and nothing from the planet could catch us as we went past."

"If *we* can't think of a way out of this situation," McNeil said, "perhaps somebody on Venus can. We'd better talk to them."

"I'm going to," Grant replied, "as soon as I've decided what to say. Go and get the radio ready, will you?"

He watched McNeil as he floated out of the room. The engineer was probably going to give trouble in the days that were ahead. Until now, they had got along well enough with each other—like most fat men, McNeil was good-tempered and friendly. But Grant realized now that the engineer lacked

force of character. He had lived too long in Space and had become soft: soft in both body and mind.

The great reflector on the outside of the ship was now facing Venus—ten million kilometres away—and was ready to send Grant's radio message. The radio waves would make the journey in little more than half a minute. For Grant and McNeil, there was bitterness in the knowledge that they were only thirty seconds from safety.

A bell rang on the radio instruments in front of Grant—the signal from Venus that he could begin to speak.

He tried to keep his voice calm and steady. First he gave a detailed account of the state of affairs on the ship, and then he asked for advice. He said nothing of his fears about McNeil: one reason for his silence on this subject was the fact that McNeil was certainly listening to the message himself.

So far no one on Venus would have heard Grant's message, even though the half-minute was now over. His words would have been recorded, and in a few minutes some radio officer would arrive and play back the recording.

That radio officer would certainly have a shock! And before long, on all the planets where human beings lived, television programmes and newspapers would be full of the story of the *Star Queen* and her men. An accident in Space drives every other kind of news off the front pages.

Until now Grant had been too worried about his own safety to give much thought to the boxes of goods in his care: nor did he think of the safety of the ship. A sea captain of ancient times, who was trained to save his ship rather than his own life, might have disapproved. Grant, however, did have reason on his side.

The *Star Queen* could never sink. Whatever might happen to her men, she herself was safe. Unless she was disturbed, she would continue for many centuries travelling along exactly the same path.

The goods she carried, Grant suddenly remembered, were insured for over twenty million dollars. There were not many

goods valuable enough to be sent from world to world, and most of the boxes in the room down below were worth more than their weight in gold. Perhaps some of those goods might be useful to him and McNeil.

He went to a locked cupboard and found the list of goods. When McNeil came back to the control room Grant passed him some of the sheets and said:

"These are some of the goods we're carrying. I think we'd better look through the list and see if there's anything that may be useful."

At least, he thought, it would give them something to keep their minds busy.

He saw that Number 347 was insured for a hundred thousand dollars. It was a single book, an early copy of something by T.E. Lawrence. He remembered hearing on the radio that the greatest library on Venus had bought it. It weighed four kilos.

A few sheets later he found some more books: twenty-five kilos of them; "of no value". It had cost a great deal of money to send those books to Venus, yet they were "of no value". What was the explanation? Perhaps someone who was leaving Earth for ever was taking his favourite possessions with him to the new world—the ten or a dozen books that, more than all others, had shaped his mind.

Number 564 was twelve boxes of film. That, of course, must be the rather shocking film about Nero and ancient Rome which everyone on Venus was so anxious to see.

There were fifty kilos of medicine, one kilo of cigars, seventy-five kilos of scientific instruments. So the list went on. Each thing was something rare or something which the industry and science of a younger civilization could not yet produce. But there was nothing, nothing at all, which gave Grant the slightest hope. He realized that he could not have expected anything, but that did not prevent him from feeling a quite unreasonable disappointment.

The reply from Venus, when it came at last, was a long one—nearly an hour. It was a list of questions, so detailed that

Grant wondered a little angrily whether he would live long enough to answer them all. Most of them were scientific ones about the ship. The greatest scientists of two planets were working together to try to save the *Star Queen* and the goods she carried.

"Well, what do you think of it?" Grant asked McNeil when the other had finished listening to the message. He was watching the engineer carefully for any new sign of loss of control.

There was a long pause before McNeil spoke.

"It will certainly keep us busy," he said at last. (Grant had thought the same.) "I won't be able to do all these tests in less than a day. And some of the questions are completely stupid!"

Grant had suspected that this was so, but said nothing as the engineer continued:

"I think they're trying to keep our spirits up by pretending they have some bright ideas—or else they want to keep us too busy to worry."

Grant was relieved and yet annoyed by McNeil's calmness—relieved because he had been afraid of another quarrel, and annoyed because McNeil was turning all his ideas about him upside down.

Grant thought of that first momentary weakness of McNeil's and wondered whether it would ever happen again. Or was it just something that might have happened to anybody?

To Grant, the world was a place of simple blacks and whites. He felt angry at being unable to decide whether McNeil was cowardly or courageous.

Perhaps he was both. But this idea was too difficult for Grant's mind to take in.

To men who are travelling through Space, time seems no longer to exist. This feeling of being outside time is not like anything else in human experience. Even on the Moon there are shadows which move very slowly from mountain top to mountain top as the sun moves across the sky. And the Earth, seen from the Moon, is like a great clock, on which the changing masses of land show the hours. But on a long voyage on a

ship moving steadily through Space, the sunlight on wall or floor does not change as the clock adds hour to hour and day to day.

Grant and McNeil were completely used to these conditions, and although they knew they were going to die, they continued to perform all the usual actions and duties of habit. Every day Grant carefully wrote his report, checked the ship's position, and did all his other ordinary work. McNeil was also behaving ordinarily as far as Grant could see, though Grant suspected that the engineer might be neglecting some of his duties.

It was less than three days since the meteor had struck the ship. For the last twenty-four hours the scientists of Earth and Venus had been having discussions about the *Star Queen*, and Grant wondered when he would hear the result of those discussions. He did not believe that there could be any scientists who were clever enough to save him and McNeil now, but it was difficult to give up hope when everything on the ship still seemed to be just as usual and the air was still clean and fresh.

On the fourth day the men of Venus spoke again. The message was in long scientific words, but the meaning underneath was: "We cannot save your lives, but you must do all you can to save the goods your ship is carrying." The message ended with very complicated orders in connection with these goods.

Grant and McNeil could not be rescued. But already, back on Earth, scientists were working out ways in which the *Star Queen* herself might be saved—at some time in the next few years. There was even a chance that she might be reached from Earth six or seven months later, but this could only be done by a fast, very powerful, and lightly loaded spaceship—and the fuel for the operation would cost a great deal of money.

For some time after the message from Venus came through, McNeil was nowhere to be seen. At first Grant was a little relieved. McNeil was free to come and go as he pleased, and he, Grant, had various letters to write (though he had decided not to write down his last wishes until the time for dying was

nearer).

It was McNeil's turn to prepare the 'evening' meal. This was a duty that he very much enjoyed, for he took good care of his stomach. When dinner time came and Grant did not hear the usual sounds from the kitchen, he went to look for his engineer.

He found McNeil lying on his bed, and looking extremely happy. Hanging in the air beside him was a large metal box which had been roughly forced open. Grant had no need to examine it closely to guess what it contained.

"It's a great pity," said the engineer quite calmly, "that one has to suck this stuff up through a tube."

Grant was too angry to reply. They looked at one another. Then McNeil said:

"Oh, cheer up! Have some of it yourself—what does it matter now?"

He pushed across a bottle and Grant caught it without difficulty as it floated towards him. It was an extraordinarily valuable wine—he remembered it from the list of goods—and even the one box that McNeil had taken was certainly worth several thousand dollars.

"I don't think there's any need," said Grant severely, "to behave like a pig—even in our present situation."

McNeil wasn't drunk yet. He had only reached the earlier stage, the stage of extreme cheerfulness. He was still conscious of things outside himself.

"I am willing," he said, speaking slowly and heavily, "to listen to any good argument against my present course of action—a course which seems extremely sensible to me. But you'd better persuade me quickly, before I get completely drunk."

He sucked the tube again and swallowed more of the red wine.

"Apart from the fact that you're stealing somebody else's property (which will certainly be saved sooner or later)," said Grant, "you can hardly stay drunk for several weeks."

"I'm going to try," said McNeil.

"I don't think you are," said Grant. He pressed his foot against the wall behind him, and gave the box a violent push which sent it flying through the open door.

As he followed it out of the room he heard McNeil shout: "That was a mean trick!"

It would take the engineer some time—particularly in his present condition—to remove the straps that fastened him to his bed. He could not follow Grant, who pushed the box through the air down into the room where goods were kept. As there was never any need to lock this room when the ship was on a voyage, McNeil did not have a key for it himself and Grant could hide the extra key that was kept in the control room.

McNeil was singing when, some time later, Grant went past his room. He still had one or two bottles of the wine, which he had taken out of the box before Grant's visit. Grant paused outside the door and listened to McNeil's singing. Suddenly, as he stood there, he was shaken by a feeling which at first he did not recognize.

It went away as quickly as it had come, leaving him sick and trembling. For the first time, he realized that he was actually beginning to hate McNeil.

There is a rule that there must be at least three men on board spaceships that are making very long journeys. The reason for this is that three men are more likely than two to work well together without serious problems.

Sometimes, however, the rule is broken. In the case of the *Star Queen* both the Government and the insurance companies had given permission for the ship to leave with only the two men on board. At the last moment her usual captain had fallen ill and there was nobody to replace him. And if the ship did not leave on time she would not be able to leave at all—for she could only make the journey when the position of the planets was right. Planets do not stand still.

Millions of dollars were at risk—so she left. Grant and McNeil were both skilled men and they were very glad of the

opportunity to earn double their usual pay for very little extra work. Although their characters were quite different, they got along well enough with each other under ordinary conditions. But conditions on the *Star Queen* were now far from ordinary.

Three days without food, it is said, is long enough to change a civilized man into an animal. Grant and McNeil were still comfortable enough in body, but their imaginations had been busy. And the most important side of their situation had not yet been mentioned by either of them. When Grant had finished working out his figures on the day the meteor struck the ship, there was one further step in the reasoning: both men silently worked this out and reached the same result.

It was terribly simple: the oxygen would be enough for two men for about twenty days. The planet Venus was thirty days away. Clearly, *one* man, alone on the ship, could stay alive until the *Star Queen* reached Venus.

Thus the important day was ten, not twenty, days ahead. Until that time there would still be enough air for two men: after that, the remaining air would be enough to keep one man alive for the rest of the voyage. It was a peculiar situation.

Certainly they could not remain silent for much longer. But it is not easy for two people to decide which of them is to kill himself. It is particularly difficult when they have stopped speaking to one another.

Grant wanted to be absolutely fair. Therefore the only thing to do was to wait until the effects of McNeil's drinking were gone, and then to put the suggestion to him honestly.

Grant could think best when he was sitting down, so he went to the control room and fastened himself into the captain's seat. After a few minutes' thought he decided that it would be better to raise the matter in a letter first—especially now that relations between himself and McNeil were so bad.

He began writing.

"Dear McNeil," he wrote. Then he tore up the sheet and started again. "McNeil. . ."

It took him nearly three hours to write the letter, and even then he was not wholly satisfied. There were some things it was

extremely difficult to express in writing. But at last he managed to finish. He put the letter into an envelope and then locked it up in his own cupboard. There was still, he told himself, a day or two before he need give it to McNeil.

Meanwhile the public on Earth and Venus had no idea of the state of feeling between the men of the *Star Queen*. For several days the newspapers and radio had been full of impossible suggestions for their rescue. On two worlds there was hardly any other subject of conversation.

Grant and McNeil knew very little of all this. The messages from Venus continued, but there was not much to say. One could hardly send words of encouragement to men who in a few days or weeks would certainly be dead.

The reporters on Earth tried many times to speak to the *Star Queen* by radio. But they all failed, because Grant and McNeil no longer gave any thought to any planet but Venus—which was now so near—and never pointed the *Star Queen's* radio reflector back to Earth.

There had been a difficult time on board the ship when at last McNeil came out of his room, but though relations between the two men were not particularly friendly everything now went on almost as usual.

Grant spent most of his time in the captain's seat, writing long letters to his wife. He could have spoken to her by radio telephone if he had wished, but the thought of all the other millions of interested ears listening to their private conversation prevented him from doing so.

In a day or two, Grant told himself, he would give McNeil his letter and they would decide what was to be done. Such a delay would also give McNeil a chance of mentioning the subject himself.

Grant did not admit to himself that he might have other reasons for hesitating over the letter.

He often wondered how McNeil was spending his time. He knew that the engineer had a large collection of books—not ordinary books, but books photographed on film—for he read