

## **It drifted.** By Katrina Crompton. Age-group 18+

### **It drifted.**

It drifted. Silently but surely it drifted through space at five miles per second, orbiting the big, blue ball that was Earth. It circled the planet and returned to its starting point every hour and a half. Since its launch, it had seen many people come and go, scientist and pilot alike. Its current crew consisted of two women and four men. They were nice people; they had worked very hard to get where they were but if they knew its secret then they may not have wanted to be there at all.

One orbit of the planet and it had already doubled three times. Geoff, the captain of the mission was readying the capsule to meet the new crew member. She was to replace Larry, a biological scientist who had been suffering severe headaches and stomach problems. At first, the pain in his head had been quite mild and he could sleep and work easily without distraction, but across the week it steadily grew worse. He described the pain as a throbbing sensation, a heated swell that would not subside. It grew so bad that it began to impact his spatial-reasoning and he could no longer work on his experiments. On a few occasions he even fainted. It was a strange sight indeed seeing a man faint in microgravity. There were no gasps or heavy collapsing, he just closed his eyes and drifted quietly and aimlessly. It was even worse seeing the man vomit. Chunks of undigested food and globules of bile floated around in his sick bag. Now it is a well-known fact that food sent to the ISS is dehydrated. Astronauts would add water to the food, if it was needed, before they began their meal. After seeing Larry spew his last supper, the rest of the crew found it difficult to eat their chicken and vegetable stew the next day.

It drifted around the planet and it doubled. Threefold on every revolution. Larry's replacement was a young astronaut named Dana. On earth she had been a structural engineer. On the ISS she was an experimental subject and a scientific researcher. She was an inquisitive character; she took every chance she could to investigate everything quite closely. If something was not immediately obvious to her she would prod at it until she got answers. When she studied for her PhD, her supervisor would sometimes grow annoyed with her constantly questioning everything, but he had to admit her curiosity was in fact a valuable asset, not a hindrance. After she had been given the formal tour of the space station and was shown where everything was, she took a moment to look around by herself. She sifted through laboratory equipment, harnesses and exercise gear and found something. One of the white padded tiles was not quite adhered properly to the station hull, it was creeping up at the edge. She drifted across and pushed the tile down but felt resistance beneath. There was a thick, wet sensation; almost as if a slug was trying to break free. Dana called over one of the other crew members, Lex, for assistance. Lex frowned when she looked at the loose tile and she immediately pulled the tile off the hull. Both women gasped when they saw what was underneath.

Temperatures had increased and with it, doubling time had increased to one hour. By now the entire crew were aware of what was behind the protruding tile. It was light-brown in colour, a thick pulsating beast that glistened and squelched. It was a biofilm. It had filled the space beneath the tile and was still growing. Slowly but surely. It had been left so long that it had grown three inches thick. Geoff advised the crew to conduct a station-wide search for more growth. Over the days that followed, three of the crew members grew ill. They exhibited symptoms not too dissimilar to Larry's. Jordan, a spritely young astronaut from Arizona, found the root of the biofilm. The growth was jutting out from the distiller keg on the water purifier. A small amount of water was trickling out from the unit, a thick mass of biofilm encircled the water. The water purifier was on the opposite side of the hull to where the first biofilm was found beneath the tile. This meant the growth was all around them. Astronauts were trained to remain calm in adverse conditions. In their lives before astronaut training, many of them

## **It drifted.** By Katrina Crompton. Age-group 18+

had spent time in the most dangerous places on Earth. Dana had worked for six months in the Sahara Desert developing plans to build solar panels; manual labour was excruciating in temperatures that were a minimum of thirty-seven degrees Celsius. Lex had lived and worked in various submarines reaching depths of over two thousand feet; places where pressure was enough to collapse a person's lungs. Jordan had visited the world's various jungles in search of new medicines; hot, clammy places where every living thing harboured either an inclination to attack a person or a disease that would kill a person. Geoff was a veteran of all these endeavours and much more. Together, the entire crew had amassed enough experience in treacherous environments to fill ten lifetimes. However, none of this experience was even enough to prepare them for inhabiting a space-station that was slowly being corroded away from the inside out by a massive, anti-biotic-resistant biofilm.

It drifted peacefully, yet at its core a violent chemical reaction was rotting the space-station components one-by-one. Acidity increased the pH levels and in turn increased the doubling time. Geoff was on the radio to control but all he got back was static. He tasked Jordan to find out if there was something wrong with the radio. Sure enough, there was. The plastic coating of the wires had rotted away, exposing the electrics to the biofilm. They had not communicated with control in over a day, this would mean control would know something was wrong, either with the communication-system or the space-station. Or both. If they decided to send help, it would take up to six hours for the spacecraft to reach the station. The question was, how long would it take for them to decide to send the spacecraft? Lex was delirious, she had a high temperature and could not keep any food down. The astronauts knew the water filter was contaminated by the biofilm but they had no choice but to drink from it. The biofilm had grown into the purification system and there was only a small amount of water left. Eventually it would run out and the only source of hydration for the astronauts would be their own urine. At one point Jordan even joked that it might be better if they drank each others instead. It was funny, but nobody laughed. They were too tired to laugh. Their heads felt heavy, their stomachs light. They had observed through a microscope that the biofilm was single-species, *Staphylococcus*. They exhausted their laboratory materials trying to find ways of combatting the growth. The Extra-Polymeric Substances coating the bacteria seemed impervious to every anti-biotic they tried. Even ethanol was not enough.

The unyielding biofilm encapsulated almost the entire station hull. Tiles on every wall were jutting out, some even dropped off completely. Dana floated beside the capsule door and stared out of the window at the planet beneath them. It seemed so peaceful. She was about to fall asleep when she noticed something heading towards the window. A small, black dot in the distance grew larger and larger as it came closer to the capsule. She screamed in happiness when she realised what it was. It was a rescue spacecraft. The rest of the crew heard her screams and drifted towards the capsule, they readied it for entry. Geoff checked the rim of the capsule and noticed that half of it was corroded, kept intact only by the seal of the door. He shouted at the crew to stop unlatching it. If the seal was broken, the entire hull would be pulled into space. His heart raced as he thought of what to do. They had to let the spacecraft attach to the station or they would not be able to get on it. However, as soon as they opened the latches, the hull would be breached. They would have to use the EVA suits; these were equipped with life-support systems that would protect them against the vacuum of space. There was only one problem. There were six crew members but only four suits.

It drifted silently around the planet, a spacecraft coming up to meet it. In less than one hour, it would meet the hatch. Geoff had already taken the decision not to use a suit; he was the station captain and his responsibility was to protect the crew at any cost. Even his life. This left the rest of the crew with the decision as to who else would go without a suit. Everyone volunteered of course. They tried to

## **It drifted.** By Katrina Crompton. Age-group 18+

develop systems for deciding; pulling straws, weighing-out each persons usefulness to society. Lex could think of nothing but the spacecraft and how much she wanted to be on it. With every passing moment she grew evermore uncertain with her surroundings and unsure with her own thoughts. She was in so much pain. She had been vomiting after every meal and she felt weak. She was dehydrated; her throat dry and sore and her head throbbing. She could barely breath properly; her chest felt heavy and every breath was a struggle. After some time, she could scarcely tell the difference between her thoughts and reality. She thought about opening the hatch to let the spacecraft attach to the station. It seemed like no time had passed between her floating in the middle of the station, discussing EVA suits with the crew and her floating near the hatch with her fingers curled around the handle. She heard muffled sounds and she turned to the crew. They seemed to be shouting something to her and waving their hands to her. Some were even drifting over towards her. It seemed as though they were telling her to stop. Stop what? The spacecraft was now clasped to the outside of the station. From her training, she remembered there was something astronauts on the station were supposed to do when a spacecraft attached. She pulled the handle.

Silence filled the station as it ruptured and the inside was pulled outside. Bits of the station, lab equipment, exercise equipment, supplies, radio equipment, people were all hurled out into space. Giant, craterous pieces of space station circled the planet. The life that had been on them now gone. The small spacecraft was sent flying towards the planet at the wrong angle, destined to crash-land in the Pacific. The debris from the rupture orbited the planet at five miles per second. Every ninety minutes it orbited the planet. People below observing the scattered remains of the station as bright dots, forming what looked like a new constellation. The station was no more. It was lifeless and empty, yet still it drifted.

**Katrina Crompton**