

# Rats

by J. B. S. Haldane

Once upon a time there was a man called Smith. He was a greengrocer and lived in Clapham. He had four sons. The eldest was called George, after the king, and it was arranged that he was to inherit his father's shop. So, at school he went to special botany classes, and learned about the hundred and fifty-seven different kinds of cabbage, and forty-four sorts of lettuce. And he went to zoology classes and learned about the seventy-seven kinds of caterpillars that live in cabbages, and how the green kind came out if you sprinkle the cabbages with soapy water, and the striped ones with tobacco juice, and the big fat brown ones with salt water. So, when he grew up he was the best greengrocer in London, and no one ever found caterpillars in his cabbages.

But Mr. Smith only had one shop, so his other three sons had to seek their own fortunes. The second son was called Jim, but his real name was James, of course. He went to school and he won all the prizes for English essays. He was captain of the school soccer team, and played half-back. And he was very clever at all sorts of tricks, and used to play them on the masters. One day he stuck a match-head into the chalk. It wasn't a safety match-head either, but one of those blue and white ones that strike on anything. So when the master started writing on the board he struck the match and nobody did much work for the next five minutes. Another day he put methylated spirits in the ink-pots, and the ink wouldn't stick to the pens. It took the master half-an-hour to change all the ink, so they didn't get much French done that hour, and he hated French, anyway. But he never did ordinary tricks like putting putty in the key-holes or dead rats in the master's desk.

The third son was called Charles, and he was fairly good at mathematics and history, and got into the cricket eleven as a slow-left handed bowler, but the only thing he was really good was chemistry. He was the only boy in his school (or in any other, for all I know) who had ever made paradimethylaminobenzaldehyde or even arabitol (which is really quite hard to make, and had nothing to do with rabbits). He could have made the most awful smells if he wanted to, because he know how. But he was a good boy and didn't. Besides, if he had, they might have stopped him doing chemistry, and he wanted to go on doing chemistry all his life.

The fourth son was called Jack. He wasn't much good at any of his lessons, nor at games either. He never managed to kick a ball straight, and he went to sleep when fielding at cricket. The only thing he was good at was wireless. He made pretty well everything in the set at home, except the valves, and he was learning to make them when the story begins. He had a great-aunt Matilda who was so old that she said she could remember the

railway from London to Dover being built. She couldn't walk, and had to stay in bed all the time. He made ear-phones to listen with, and she said she hadn't been so happy since Queen Victoria's time. Jack was very clever with other electrical things too.

He made a special dodge to get electric light for his father's house without paying for it, and the meter didn't register anything for a week. Then his father found out what was happening and said, "We mustn't do that, it's stealing from the electric company." "I don't think it's stealing," said Jack. "A company isn't a person, and besides the electricity goes through our lamps and back again to the main. So we don't keep it, we only borrow it." But his father made him take his gadget down, and even paid the company for the current, for he was an honest man.

Mr. Smith had a daughter named Lucille, but everyone called her Pudgy. She doesn't really come into the story, so I shan't say anything more about her till the end, except that when she was little her front teeth stuck out; but in the end she managed to push them in.

Now at this time there was a great plague of rats in the London Docks. They were specially fierce rats, whose ancestors had come on steamers from Hong Kong along with tea and ginger and silk and rice. These rats ate all sorts of food which are brought to London in ships because we cannot grow enough food in England to feed all the people there. They ate wheat from Canada and cheese from Holland, and mutton from New Zealand and beef from Argentina. They bit out pieces from the middle of Persian carpets to line their nests, and wiped their feet on silk coats from China. Now the man who is at the head of all the docks in London is called the Chairman of the Port of London Authority, and he is very big man indeed. He has an office near Tower Hill that is almost as big as Buckingham Palace. He was awfully angry about the rats, because he has to look after the cargoes that are brought in ships from the time they are unloaded till they are taken away in trains and lorries and carts. So he had to pay for the things the rats ate. He sent out for the best rat catchers in London. But they only caught a few hundred rats, because they were a very cunning kind of rat.

They had a king who lived in a very deep hole, and the other rats brought him specially good food. They brought him chocolate that had come from Switzerland, bits of turkey from France, dates from Algiers, and so on. And he told the other rats what to do. If any rat got caught in a trap, he sent out special messengers to give warning of the danger. He had an army of ten thousand of the bravest young rats, and they used to fight any other animals that were sent against them. A terrier can easily kill one or two rats; but if a hundred rush at him all at once, he may kill three or four of them, but the others will kill him in the end. The rats with the toughest teeth were trained to be engineers, and used to bite through the wire of rat-traps to let prisoners out.

So in one month these rats killed a hundred and eighty-one cats, forty-nine dogs, and ninety-five ferrets. And they wounded a lot of others so badly that they ran away if they even smelt a rat, let alone saw one. And they let out seven hundred and forty-two prisoners from six hundred and eighteen traps. So the rat catchers lost their best dogs and ferrets and traps, and gave up the job in despair. The people in the docks send round to the chemists' shop for all sorts of rat poison, and sprinkled it about mixed with different sorts of bait. But the king rat gave orders that none of his subjects were to eat food unless it came straight out of a box or a barrel or a bag. So only a few disobedient rats got poisoned, and the others said it served them right. And the poison was no more use than the dogs and ferrets and traps.

So the Chairman of the Port of London Authority called a meeting of the Authority in the great Board Room of his office, and said, "Can you suggest what is to be done about the rats?" So the Vice Chairman suggested putting an advertisement in the papers. The next week advertisements came out in all the papers. It took up a whole page, and was printed in huge letters, so that almost everyone in England read it. All the Smith family read it except great-aunt Matilda, who never read the papers, because she listened in to all the broadcast news.

Now this advertisement made all the competitions in the papers look silly. For the Chairman of the Port Authority offered a hundred thousand pounds and his only daughter in marriage to the man who would rid the docks of rats. (If the winner were married already, of course, he wouldn't be allowed to marry, but he got a diamond bracelet for his wife as a consolation prize.) There was a photograph of the hundred thousand pounds; and they were real golden sovereigns, not paper notes. And there was a photograph of the daughter, who was very pretty, with short curly golden hair and blue eyes. Besides this, she could play the violin, and had won prizes for cookery, swimming, and figure skating. The only snag was that the competitors had to bring their own things for killing the rats, so really it cost a lot of money to go in for competition.

Still thousands and thousands of people went in for it. They had to get three extra postmen to take the letters to the Chairman the next morning. And so many people rung him up on the telephone that the wires melted. For months and months all sorts of people tried their luck. There were chemists, and zoologists and spiritualists and lion hunters, but none of them were able to kill more than a few rats. What was worse, they interfered with the unloading of the ships, and quite a lot of corn had to be sent round by Liverpool and Cardiff and Hull and Southampton instead of London.

Among the people who tried their luck were Jim and Charles and Jack Smith. Jim thought that if only he could make a trap that looked quite ordinary, he would be able to fool the rats, just as he used to fool the masters at school. Now he knew that there were all sorts of old tins lying about the docks, so he designed a special sort of trap made from an old tin.

The rat smelt the bait inside it and jumped on the top. But the top was a trap-door, and so the rat fell through and couldn't get out again. He spent all his spare time making these traps, and he got his friend to help. He borrowed ten pounds from his father, and got Bill Johnson, who was an out-of-work tinsmith, to make more for him. In the end he had one thousand three hundred and ninety-four of these traps; but seventeen of them were pretty bad, so he didn't bring them. He went along to Tower Hill with his traps on one his father's carts, and saw the Vice Chairman, who was a duke, and was looking after all the rat-catching. The Vice Chairman said, "Of course these traps aren't enough to go all around all the docks, but we will try them on one." So they tried them on the West India Dock, where the ships come from Jamaica and the other islands round it, with sugar and rum and treacle and bananas. I don't think that was a very good place to choose, because the rats there are quite specially quick and nimble. This is because they are constantly tumbling into barrels and vats and hogsheads and demijohns of treacle. The slow ones get stuck in it, and that is the end of them. Only the quick ones escape. So all the rats round there are very quick, and good climbers.

Half Jim's traps were baited with cheese and half with bacon. The first night they caught nine hundred and eighteen rats. Jim was terribly pleased, and thought he was going to win the prize. But the next night they only caught three rats, and the third only two. The king rat had warned all his subjects to avoid tins, and only stupid and disobedient ones got caught. On the fourth night they moved the traps to the Victoria Docks, but they only caught four rats. The warning had been spread. So Jim went home very sad. He had wasted a lot of time and ten pounds, and the other boys at school called him Tinned Rats.

Charles Smith had quite a different scheme. He invented a special kind of poison with no taste or smell. I am not going to tell you what it was, or how to make it, because some murderer might read this story, and use it to kill all sorts of people. He made a lot of this poison, and he also made a lot of the stuff that gives the smell to Roqueforte cheese, which is a very cheesy kind of cheese made in France. This is called methyl-heptadecylketone, and I think it has a lovely smell. Some other people don't like it, but rats do. He borrowed twenty pounds from his father, and got a hundred cheap and nasty cheeses. Then he cut each into a hundred bits. He soaked them first in poison, and then in the stuff with the Roquefort smell, and put them into ten thousand cardboard boxes. He thought that if he did that the rats would not think that they were ordinary poisoned bait, which is just scattered about, and not in boxes at all. But the boxes were cardboard, so that the rats could get in quite easily.

All through one day two men with wheelbarrows went round the docks, leaving the ten thousand cheese boxes in different places. And Charles went behind them with a squirt, and squirted the cheesy, stuff over them. The whole of east London smelt cheese. That afternoon when the sun set the rats came out, and they said to one another, "This must be a marvellous cheese, quite a little box of it smells as much as a whole case of ordinary cheese." So a great many of them ate it. They even brought some back to the king rat. But

luckily for him he had just had a huge meal of walnuts and smoked salmon and wasn't hungry. The poison took some time to work, and it wasn't until three o'clock in the morning that the rats began to die of it. The king at once suspected the cheese, and sent out messengers to warn his subjects against it.

Also there was a wicked rat which had been sentenced to death for eating its own children, and the king made it eat the bit of cheese that had been brought to him. When he died he knew the cheese was poisoned, and sent out another lot of messengers. The next morning they picked up four thousand five hundred and fourteen dead rats, and ever so many more were dead in their holes, besides others that were ill. The Chairman was so pleased that he gave Charles the money to buy another lot of cheeses. But when, two days later, they left them about, only two out of the eight thousand boxes had been opened. So they knew the rats had been too clever for them again.

Charles was very sad indeed. He had been so sure of his success that he had ordered a wedding ring for his marriage with the Chairman's daughter, and written to the Archbishop of Canterbury to marry them. Now he had to write to the jeweller and the Archbishop to say he wasn't going to marry after all. And worst of all, the cheesy smell stuck to him for a month. They wouldn't have him back in school, and he had to sleep in the coal shed at home.

Last of all Jack tried his plan. It needed a lot of money, and though he borrowed thirty pounds from his father, it was not enough. But he borrowed some more from me, and sold some wireless sets that he had made, until he gradually got all he needed. He brought some very fine iron filings, much finer than the ordinary kind, and had baked them into biscuits. The biscuits were left about the docks. At first the rats would not touch them, but later they found they did them no harm, and began to eat them.

Meanwhile Jack got seven perfectly enormous electromagnets, which were put in different docks. Each was in the middle of a deep pit with smooth sides. And cables were laid so that current from the District Railway and the East London Railway could be put through the magnets.

Luckily Jack knew the head electrical engineer on the underground railways, because they were both keen on wireless, so he was able to arrange to borrow their current. When he thought that the rats had eaten enough iron filings he made arrangements to turn the current through the magnets. All loose iron, steel, or nickel things had to be tied up. And the ships, because they are made of steel and iron, had to be tied up very tight indeed with extra cables. And all the people in the docks that night had to wear special boots or shoes with no nails in them; except the Vice Chairman who was a duke, so of course he had gold nails in his boots.

At half-past one in the morning the last underground railway train had stopped, and they turned all the current that had been working the trains into the first magnet. A few rusty nails and tin cans came rushing towards it, and so did the rats, but more slowly. They

were full of iron filings, and the magnet just pulled them. Soon the hole round the magnet was full of rats, and they switched the current on to the next magnet. Then they turned on the third magnet, and so on. Of course only the rats that were above ground were pulled into the holes by the magnets. But they turned them on again and again, and as more and more came out of their holes they were caught too.

The king rat knew something was going wrong, and felt himself pulled to one side of his hole. He sent out messengers, but they never came back. At last, he went out himself, and a magnet pulled him into one of the pits. When morning came they turned on water taps and drowned all the rats that had been caught by the magnets. These rats weighed a hundred and fifty tons. No one ever counted them, but they reckoned to have caught three-quarters of a million.

There were some awkward accidents. A night watchman called Alf Timmins had forgotten to wear boots without nails. So the magnet pulled him along feet first. He managed to get his boots off just as he was on the edge of the rat pit, but a rat hung on to each of his toes, and the magnet pulled these rats so hard that all his toes came off. So now he has no toes, like the Pobble, and takes a smaller size in boots than he used to. But another watchman called Bert Higgs had better luck. Before the war he had been a great billiard-player, but he got a bit of a shell into his brain, and couldn't play billiards any more. And none of the doctors could get the bit out. So when Jack turned the magnet on the bit of shell came popping out of his head, and the part of his brain made him so good at billiards started working again. So now he is billiard-champion of Poplar.

The next night they turned on the magnets again, and caught a lot more rats, about a hundred tons. Their king was dead, so they did not know what to do. After that the few rats that were left were so frightened that they all ran away. Some got on to ships and went abroad. Some went into London, and were a great nuisance to the people there, but none stayed in the docks. They caught the fourth night, and though they hunted with dogs and ferrets the next day, there wasn't a rat in the place.

So, Jack Smith got the hundred thousand pounds and married the Chairman's daughter on a ship at sea. He didn't want to be married in church, and he thought the registrar's office was ugly, so he hired a ship, and when they were three miles from shore the captain married them, which he couldn't have done if they had been only two and a half miles away, because that is the law. They had two boys and girls, and Jack got a very good job with the B.B.C. as an engineer. With all that money he might have lived all his life without doing any work, but he was so fond of wireless that he wanted to go on working at it.

His sister married the duke, so she is a duchess; but of course duchesses aren't so important as they used to be. She has diamond heels in her shoes to match her husband's gold nails. He gave his brothers Jim and Charles money to start in their professions. So

Jim spent it on magic wands and trick hats and tables, and became a conjuror, and a very good one too. And Charles went to the University and became a professor of chemistry. I am a professor too, and I know him quite well. So they all lived happily ever after.