The Kingdom of the Grey Mice (part 2) - The Exploitation of the Mines

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On our known island[1] somewhere isolated in the Pacific lives our special species of mouse. All mice on that island are born pink, but while growing up they change colour: some turn grey, others black. Although the cause of the colour shift is not yet known, biologists observed a distinct difference in behaviour.

You can rarely notice a grey mouse because he slips away at the slightest sign of danger. He manages his nest like clockwork and is a model of calm and control. The black mouse, you do not have to look for him. Wherever you go, you feel his presence. He's personally involved in everything he does. In his nest, the mice are very driven. They are, as it were, inspired and committed in order to achieve something. The nest is usually located at the borders of a colony and is a hive of vibrant passion.

A while ago, the group of biologists could observe a unique event. It began rather accidentally when a biologist saw a black mouse rooting in the ground. Out of scientific curiosity, the biologist continued to study the behaviour of the mouse. The rodent was apparently digging for a while because there was already a small tunnel noticeable. What followed was an opportunity to better understand the species.

Our mice seem to be fond of a tuber that grows deep underground. The black mice were the first to discover this. Given their typical behaviour, the biologists were not surprised that they were the first. However, digging up tubers proofed difficult. First, you must know how to find them. Somehow the black mice were very proficient at this. Most tunnels led almost in a direct line to a tuber. The quasi absence of twists or turns gave the biologists the impression that the mice could smell the roots. Secondly, there were great risks: local water bubbles could flood the tunnels and lead to the drowning of the digging mouse, the walls may collapse, etc.

The mining of the tuber was, certainly in the beginning, a very adventurous enterprise - just the thing for a black mouse. No wonder that the first tunnels were dug by them.

The flavour of the tuber was so delicious that it wasn't long before the grey mice also went to work. After all, the tuber was not only tasty but also very nutritious. It was possible to feed a large mouse colony without the risk of a food shortage during winter. The efficient operations of the grey rodents would make sure of that!

They convinced a number of black mice to introduce their grey counterparts to the art of mining. It soon appeared that grey mice could dig well, but they were very poor at finding tubers. This problem

[1] See the "Article 04 - The Kingdom of the Grey Mice".

was quickly resolved by giving black mice access to the tunnels so that they could point towards the tubers. By regularly visiting the diggers, the black mice could adjust the direction of the tunnels. While this resulted in winding corridors with frequent sharp turns, the tubers were found.

Unfortunately, the grey mice dug without paying attention, which resulted occasionally in flooded tunnels. In the meantime, a grey mouse had climbed to the post of overall manager because the few black mice were busy directing the diggers to the tubers. This grey management mouse sought a solution for the flooding. Now it turned out that certain grey mice had an eye for safety. The grey management mouse selected safety mice that occasionally had to walk through the corridor and decide whether further digging was safe or not.

This resulted in tunnels with digger mice, black pointer mice and grey safety mice at the same time. This led to an entanglement of animals and it looked like a mess. Coordination was urgently needed! So, from that day on there was a coordination mouse at every entrance of a tunnel. They had to make sure that there were at most 2 mice in a tunnel: a digger mouse and another type of mouse.

Everything went smoothly. They harvested many tubers and the colony feasted on them. The demand for tubers increased and so the production had to follow. This meant more pointer mice, but there were too few black mice employed in the mining business to accomplish this. The black mice that were not employed by the grey mice were not interested in a job in the colony enterprise because they loved exploring their own small, expeditionary mines. Therefore, the manager decided to train some grey mice as pointer mice. This should be possible provided a good training program with black mice as teachers. He gathered a group of volunteer mice and selected the best candidates. The black mice were pulled away from the tunnels and replaced by trained pointer mice. Although this programme resulted in even more bends and longer corridors, tubers were found and excavated.

The practice of digger mice dragging a found tuber to the entrance of a tunnel demanded a lot of time. Time was certainly wasted because most digger mice were slow and the tunnels long.

This problem was efficiently tackled. The manager selected some fast runner mice and gave them the job of bringing the tubers to the surface. This change made the coordination at the entrance harder, but more coordination mice also solved that. Meanwhile, the selection of suitable mice for specific jobs was in the hands of a select group of selector mice and the trainer mice group was extensive. Black mice became an endangered minority because the rare candidates were all refused. Their pioneering spirit did not fit with the structured world of grey mice. And besides, they were no longer needed.

The mine was an example of efficiency. All work was carried out in optimal conditions. The mining enterprise was the main employer of the colony. The manager saw that everything was good.

And yet ...

During his inspection tour, the management mouse saw tubers everywhere. Some tubers were not optimally stored. Guard mice were looking agitated at the whole mess, unable to position themselves to oversee all the products. If all the tubers would be gathered in one place, their

preservation would be better controlled and the guards would have a better overview. The plan was put in place. Another problem solved efficiently.

At the eve of the first winter, a food shortage issue became apparent. The management mouse in full anger appointed a control mouse who later revealed that some coordinator mice were employed at empty tunnels, some runner mice did not know what to do ... The remedy was simple: a more centralised control of the enterprise. All information had to be forwarded to a special guidance cell that had to analyse it and adjust the operations. The result was immediate: coordinator mice were only sent towards active tunnels, runner mice were only where they were needed, the group trainer mice was reinforced so that everyone could be trained and retrained on time, ...

And then the famine hit ...

What did the biologists observe? The digger mice in the large mine were barely digging anymore. If they were digging at all, the direction to dig was not clear. It seemed that finding a tuber was more a matter of luck than of targeted work. Why did they not dig? First, they had to have access to the tunnel. If there was no coordinator mouse, they could not go in. If they were inside and reached the end of the tunnel, they had to wait for a pointer mouse. If that took too long, they had to find a runner mouse so that they could send a message that they were waiting. Over and over again, the runner mouse had to explain to a coordinator mouse why he came out of a tunnel without dragging a tuber. The runner mouse had to deliver the message to the guidance cell and then wait until he knew what would happen. If the pointer mouse finally indicated the right direction, the safety mouse had to give its approval. Again waiting (the few who started on their own initiative without following the whole procedure were re-trained because they apparently did not understand the procedure). For this, the runner mouse had to leave the tunnel, leaving the digger mouse without work and without news. After approval of the safety mouse, the digger mouse was allowed to start digging, but occasionally he had to ask confirmation of the direction. After all, deviating from the right heading meant losing effort and time, and thus was not efficient. If a digger mouse took too long to reach a tuber, he was sent to a retraining session. During this retraining he was taught how to dig better and faster. Everybody had to be professional so that it all fit together like an oiled machine.

But despite all these improvements, the number of tubers per mouse was in constant decline and hunger hit hard.

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Far from this large mining enterprise were small groups of grey and black mice working together. Their family members knew no hunger.