

# I Can Meet with Dead Scientists

## Chapter 251 - 170 The Final Part of the Mission, Old Su's Obsession (5.8K)

[ 1,047 words ]

### Chapter 251: Chapter 170 The Final Part of the Mission, Old Su's Obsession (5.8K)

An hour and forty-five minutes.

This number is not the time some foolish author took to write this Chapter, but the final time it took Xiaozhao to successfully take over the Imperial Palace.

That's right.

Not even three hours altogether.

The 'loyalist' army occupied the entire Imperial Palace.

After the battle in the Forbidden City began, the choice for the southern, northern, and western garrison troops was only one:

To support the battlefield.

Having abandoned the city gates, which were the defensive 'fortress', the garrison troops lost their most crucial protective barrier, and the entire battle situation instantly turned into a ground confrontation.

Not to mention the Forbidden City had only a little over two hundred personnel on duty; after Old Zhong and others captured the Huaitong Gate, they even had ample time to lay an ambush along the 'enemy's' route using the cover of night.

With double the number of troops and taking the initiative, the final result was naturally a great victory for Old Zhong and others.

Another half an hour passed.

Wende Hall.

At this moment, this outer court hall was gathering more than ten key figures involved in the coup, both civil and military.

Old Zhong, wearing armor, stood in front of the seat, respectfully reporting to the seated Xiaozhao:

"Your Highness, the garrison troops from the south, north, and west have all been captured, and there is no longer any hostile force within the palace."

"The garrison troops from the north and west had formerly served under Chu Dao, and once they realized the situation was lost, Chu Dao himself intervened, and they surrendered without any bloodshed."

"The southern garrison engaged in combat with our troops. We lost twenty-three soldiers, and eighty-six were wounded."

"The southern garrison had one hundred and four casualties, and most of the remaining are injured. Efforts are currently underway to persuade them to surrender."

Upon hearing the casualty figures on both sides, Xiaozhao's face slightly changed, a trace of confusion flashing in his eyes.

After all, he was still just an underage prince, a prince only a few months ago.

Although influenced by Emperor Zhezong to harbor ambitions and prepared for bloodshed or even defeat before the coup, it was his first time personally experiencing such a brutal situation.

But very soon.

Xiaozhao realized his identity, and the confusion in his eyes was immediately replaced by determination:

"General Zhong, regardless of whether they are dead or wounded, you must ensure proper consolation for the soldiers after the matter is over—remember, whether enemy or ally, this task is entrusted to you."

Old Zhong immediately clasped his hands in salute and replied:

"Uncle Yi understands!"

Then Xiaozhao glanced outside the hall, noticing dawn breaking, and said:

"General Zhong, what is the situation in the city now?"

Old Zhong produced a letter from his person and had it passed to Xiaozhao via an eunuch, explaining at the same time:

"Your Highness, the forces led by Zheng Ru and Zheng Chen have already controlled the residences of the court dignitaries, including but not limited to Cai Jing, Liang Shicheng, Zhao Tingzhi, Tong Guan, etc....."

"At the same time, a curfew is still in effect in the city, with all gates manned by our troops, and Chu Dao has also proceeded to the city to oversee the situation."

Xiaozhao's heart slightly relaxed.

With careful planning, in addition to the Imperial Guard's right camp being under control, the entire coup, at least from the perspective of the situation, was nearly secure.

Then he thought of something and asked:

"By the way, Qing... what about those captured officials?"

Old Zhong smiled slightly, his expression unchanged, and replied:

"Your Highness, more than seventy captured officials have been rescued from the prison, and the same goes for their relatives and friends."

"Strangely, among all these hundreds of people, not a single one is injured."

"According to the prison guards, this was Master Guo's instruction, explicitly stating that no one should be harmed."

When mentioning the name Master Guo, Old Zhong's tone appeared somewhat solemn, even with a hint of...

Respect.

Just like what was said before.

Just based on what Guo Jing did earlier, let alone Emperor Huizong.

In feudal times, except for a few individuals who never believed in ghosts and gods until death, most people definitely held him in awe and dread, even if they were enemies.

To a certain extent.

Xu Yun practically created an 'Immortal'.

Xiaozhao then slightly glanced at Old Su and Xu Yun beside him, nodding, he said:

"I understand, General Zhong, the task of appeasing these released Yuanyou Faction officials will be jointly handled by you, Scholar Jiang, and Vice Minister Li."

The Scholar Jiang that Xiaozhao mentioned is Jiang Zhiqi, and the Vice Minister Li is Li Qingchen, both of whom are now key figures in the Yuanyou Faction.

After assigning the appeasement task for the Yuanyou Faction.

Xiaozhao laid out some more tasks and then dismissed everyone, leaving only...

Old Su and Xu Yun.

After everyone else left, he first looked at Old Su and bowed deeply:

"Mr. Su, what should be my next move, please, do enlighten me!"

When choosing to enter the palace together with Xiaozhao, Old Su was already prepared to be labeled by future generations.

Now that things were set in stone, he had long adjusted his mindset, and he said:

"Your Highness, may I ask a question first?"

Xiaozhao nodded, gestured with his right hand, and said:

"Mr. Su, feel free to speak."

Old Su gave him a look and asked:

"I wonder how Your Highness intends to deal with Prince Duan?"

"Prince Duan?"

Not having heard the name for a long time, Xiaozhao was first slightly taken aback and then realized Old Su was referring to the deposed Emperor Zhao Ji.

This answer had been considered by Xiaozhao even before the action was taken, so he quickly replied:

"Mr. Su, after all, Zhao Ji is my blood relative. He wanted to kill me, but I will not, and cannot, kill him."

"Therefore, I plan to build an Imperial Manor on the outskirts of Bianjing, appoint twenty to thirty servants, and Zhao Ji shall live out his days there."

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## Chapter 252 - 170 The Final Part of the Mission, Old Su's Obsession (5.8K)\_2

[ 970 words ]

### Chapter 252: Chapter 170 The Final Part of the Mission, Old Su's Obsession (5.8K)\_2

Old Su sighed with relief at the words.

This issue was his small test, and Xiaozhao's response was undoubtedly the high-scoring choice.

To some extent, it proved that Xiaozhao hadn't lost his mind due to the change in status.

He then paused and glanced around.

With only three people present in the palace, he directly laid out some words:

"Your Highness, in my humble opinion, if you wish to inherit the throne, you must do so with a justified name."

"If Your Highness's name is to be justified, then Zhao Ji's name must be 'flawed.'

"Therefore, the first thing Your Majesty must do, after stabilizing the court, is to weep at the ancestral temple about Prince Duan's foolishness and frivolity, indicating that Your Highness took this action out of helplessness."

"Secondly, the Minister of Rites should petition while Your Highness modestly declines three times, before reluctantly accepting the will of the masses."

"Thirdly, upon ascending the throne, grant a general amnesty."

Anyone who has seized power in a previous life knows.

After a coup, to legitimately inherit the throne, it generally involves weeping at the ancestral temple, modestly declining, and granting amnesty.

Crying before the ancestral temple is simple, just do as Old Su suggested.

After crying, express a willingness to have another emperor inherit the throne, declaring you'll accept any punishment after the emperor takes power, solely to ensure the continuation of the national destiny.

As long as you're not as bad an actor as that gaggle, you can generally pass this hurdle.

However, the modest declining and refusing are a bit more troublesome.

First, you have to invite the Minister of Rites from the Zongzheng Temple to plead personally.

For instance, they might say you, Your Highness, have the highest virtue among the princes, the most prestige, and only you are worthy to inherit the throne...

This is often when.

The Minister will also bring along a very elderly family elder, who, with his last breath, makes up a story, typically involving signs at birth.

For example, at the moment of your birth, all the jade pendants in the palace vibrated in unison, a divine sign....

Xiaozhao must firmly reject it.

I think Zhao Yu is quite good...

Zhao Yu must cooperate by saying it can't be him, it should be you.....

After three rounds of refusals, Xiaozhao can 'reluctantly' accept the throne.

Once he ascends, he must proceed with the third step.

That is, to grant a general amnesty, waive one year's taxes to earn public gratitude and reputation.

However, soon.

Old Su thought of something else, his eyebrows slightly furrowed, and he said:

"But Your Highness, in my humble opinion, you probably need to add something to the third step....."

Xiaozhao, somewhat confused, responded with a hum and asked:

"Add something? Why do you say that, Mr. Su?"

Old Su looked up at him and sighed:

"Your Highness, do not forget, the late Emperor and Empress Dowager passed away within a year, Prince Duan ascended merely seven months ago."

"At the beginning of Prince Duan's reign, he also performed the third step....."

"He granted amnesty to the prisoners across the realm, a backlog of over twenty thousand prisoners, and reduced taxes for a year..."

Xiaozhao was slightly taken aback, then his brows furrowed.

Indeed.

How did he forget this?

It's been only seven months since Zhao Ji ascended the throne, he had just granted a general amnesty with over twenty thousand prisoners.

Now, what's left to pardon are just the new prisoners within seven months, which is nowhere near the number of accumulated offenders over the years.

Compared to amnesty, reducing taxes is even more troublesome:

Zhao Ji's tax decree is valid until next year, should Xiaozhao override it, or let it continue?

If he chooses to override it, nothing changes for the people:

A new emperor, yet only one year of tax exemption, how many will express gratitude towards Xiaozhao?

There might even be folk songs mocking the change of emperors being all the same.

But if he continues to extend it, wouldn't he be affirming Zhao Ji's legitimacy?

True.

Xiaozhao can choose to prolong it, such as a three-year tax exemption and so on.

But again, given Zhao Ji initially issued the tax exemption edict, such a move lacks strength.

Thinking of this.

Xiaozhao couldn't help but look at Old Su, once again bowing deeply:

"Please instruct me, Mr. Su!"

Old Su thought for a moment, a gleam suddenly flashed in his eyes, and he said:

"Your Highness, if you can't achieve anything with the timeframe, then only one way remains....."

Xiaozhao quickly asked:

"What way?"

Old Su raised his head, looking at the ceiling, and said:

"Try to make the ascension incredibly extraordinary, for instance leveraging Master Guo's current reputation, to create an unprecedented....."

"Auspicious heavenly sign!"

As soon as he finished speaking.

Old Su and Xiaozhao turned together, their gazes falling upon...

Xu Yun off to the side.

Xu Yun: "...."

After a moment.

Xiaozhao thoughtfully nodded, then walked with Old Su to Xu Yun, and said to Xu Yun:

"Mr. Wang, it seems we need to have a good chat."

Seeing Xiaozhao's intense gaze, Xu Yun's lips twitched slightly.

Earlier, during the control of the Forbidden City's central district, Old Zhong and others naturally also captured Guo Jing who performed the night rituals.

Although due to a respectful fear of mysticism, Old Zhong and others treated Guo Jing mildly, some matters couldn't withstand questioning.

In that situation, Old Su could only choose to reveal the truth to Xiaozhao.

That is to say...

At this moment, Xiaozhao already knew that Xu Yun was the real mastermind behind the scenes.

Therefore, towards Xu Yun, Xiaozhao's feelings were very, very complex:

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## **Chapter 253 - 170 The Final Part of the Mission, Old Su's Obsession (5.8K)\_3**

[ 689 words ]

### **Chapter 253: Chapter 170 The Final Part of the Mission, Old Su's Obsession (5.8K)\_3**

There was both anger at him for leading himself into a desperate situation.

And gratitude for pushing the ministers' line and General Bian's Line, bringing him just one step away from the imperial throne—after all, with the resources Xiaozhao previously had, a successful coup would have been impossible.

Besides that.

There was also a hint of surprise and fear at his ability to control celestial phenomena and earthquakes...

The same as before.

All of Guo Jing's actions were 'miracles' that no one had ever achieved in history.

Although Guo Jing's traitor identity had been exposed, this only transferred the mysterious 'Immortal' image from Guo Jing to Xu Yun.

However, compared to Zhao Ji.

Xiaozhao was more rational, not so superstitious, and he had encountered some basic scientific knowledge.

Therefore, his acceptance of Xu Yun's ability to predict celestial phenomena was slightly higher, not entirely attributing it to ghosts and gods.

As a quasi-emperor with vast ambitions.

Xiaozhao also understood very well the immense value of the 'science' Xu Yun mastered.

He definitely couldn't kill him, but apprehension also existed.

Combined with the multitude of emotions above, Xiaozhao's heart was truly a mix of feelings.

As for Xu Yun...

He could roughly guess Xiaozhao's mindset at this moment.

Honestly speaking.

If he really were a Song Dynasty person who had inherited the 'Wind Spirit Moon Shadow Sect,' he wouldn't say for sure what he would choose.

But when Xu Yun's identity became that of a Transmigrator who could return to reality, his choices became much clearer:

As long as he completed Old Su's task before the time limit ended, he could return to reality, with the maximum time limit being another year.

And considering his value.

No matter how Xiaozhao might change in the future, at least for the remaining year, he would definitely not be in danger of losing his life.

Thus, with this mindset, Xu Yun's mood relaxed significantly.

He cupped his hands toward Xiaozhao and said:

"Prince Jian, the so-called auspicious omens are, in the end, nothing but techniques unknown to the people of the time."

"Examples include the seven-colored immortal light, inscriptions on Bian River, etc. If well prepared, arranging them isn't difficult."

"Therefore, Your Highness, there are various methods to create auspicious omens. Please specify a particular category, so the common folk can devise a detailed plan."

Xiaozhao nodded slightly, turned to Old Su, and asked:

"Mr. Su, do you have any ideas on auspicious omens?"

Old Su pondered for a moment, and a thought he had buried due to its absurdity suddenly emerged in his mind.

With a touch of hope, he asked Xu Yun:

"Xiaowang, in mythical legends, immortals all have steeds like cranes and phoenixes, allowing them to overlook mountains and rivers and travel thousands of miles a day."

"I do not seek to see celestial creatures, but with the countless inheritances of the Wind Spirit Moon Shadow Sect, is there any mystical technique to bring people to the sky for a view?"

"If so, Your Highness could first govern as regent, and when the time comes to ascend to the throne, proceed to ascend to the sky. Who would dare question Your Highness's prestige then?"

As soon as Old Su finished speaking.

A familiar dialogue box appeared in front of Xu Yun:

[Ding!]

[The current dungeon mainline mission has been triggered. The mission requirements are as follows:]

[Please, Wall-Facer, fulfill Su Song's wish to ascend to the heavens before his death, with the final score determined by the technical difficulty and completion level.]

[Note: Create chaos as much as you can, boy, and praise the Sun!]

Seeing this.

Xu Yun was silent for a moment, then slowly spoke:

"To ascend to the sky? This matter...is not difficult."

Old Su and Xiaozhao's eyes lit up.

Especially Old Su, his somewhat aged heart began to beat faster:

"Xiaowang, are your words true?"

Xu Yun nodded seriously, affirming:

"Of course, absolutely true. In the Wind Spirit Moon Shadow Sect, there is a basic skill that requires just hands, called..."

"Airplane."

.....

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## **Chapter 254 - 171 "The Things About Me Hand-Turning Airplanes After the Coup in the Great Song" (6.8K)**

[ 1,072 words ]

### **Chapter 254: Chapter 171 "The Things About Me Hand-Turning Airplanes After the Coup in the Great Song" (6.8K)**

Throughout the long history of human civilization, our ancestors have almost never stopped gazing at the heavens.

Why do humans yearn for the sky?

Before Xu Yun traveled to the Song Dynasty, he once heard an explanation that began with material particles:

As we all know.

All elements in the universe come from supernova explosions.

They have created everything in the material world you see, including yourself.

The atoms that make up your left hand and the atoms that make up your right hand may come from different stars.

When you look up at the starry sky.

What your eyes are gazing upon may be the material from the galaxy that comprises your eyes.

Your thoughts soar as brain cells transmit neural impulses.

Every transmission of a neural impulse might be the first handshake between materials across galaxies.

You look up to the heavens.

Because you originate from the heavens.

Xu Yun does not know if this scientifically grounded theory can apply to the idealistic realm, but one thing he is very certain of:

Throughout the long history of Huaxia civilization.

There have indeed been countless ancestors who have expressed their longing for the heavens, either through words or through practice.

For example, in the Preface to the Orchid Pavilion Collection by Jin's Wang Xizhi, it is written:

"Looking up to observe the vast universe, looking down to examine the abundance of species, allowing the mind to roam and the emotions to expand, fully enjoying the pleasures of the senses, indeed, it is delightful."

Also, in Li Bai's Song of Yuan Danqiu:

"Long revolve, tread on stars and rainbows, riding a flying dragon with ears against the wind, spanning rivers and seas to connect with the sky, I know your heart wanders endlessly."

In these poems.

The authors have directly or indirectly expressed their desire to fly to the heavens, further conveying their attitude toward life.

Looking down upon the world from high above, living life to the fullest.

While some people, unlike Li Bai and Wang Xizhi, might lack literary talent, they possess a heart for exploration.

For example, at the present moment, Xu Yun finds himself in the year 1100 AD, the first year of a new century.

According to historical trajectory.

years later, the Jin People would destroy the Northern Song, and the two emperors were captured.

A hundred and thirty years later, the Yuan Dynasty would abolish the Southern Song, leaving the mountains and rivers to fall into the hands of outsiders.

However, the Yuan Dynasty barely lasted a century before the sun and moon would renew the Great Song's days.

At that time, a Ten Thousand Households would emerge, named Tao Chengdao.

Tao Chengdao was proficient in gunpowder and made significant contributions during Zhu Yuanzhang's conquest, yet his own curiosity about the sky never waned.

Finally, in 1390 AD, Tao Chengdao made a decision:

He would fly to the sky!

According to Tao Chengdao's plan.

He would attach 47 rockets to the back of a serpent-shaped chair, utilizing the outward burst of gases produced by solid explosives burning inside the rockets.

The rockets would fly forward due to the reactive force of these gases, and the multiple rockets tied to the chair would propel both the chair and rockets together.

In this way, as he sat in the chair, he would be propelled to the sky by the rockets' thrust.

In addition to this.

He also arranged two giant kites on the chair.

This allowed him to fly continuously and also to land stably.

The renowned Elder Qian from later generations once described the scene of Tao Chengdao's flight attempt like this:

"At that time, his servant attendants were terrified, yet when faced with the surrounding people's concerns, Tao Chengdao laughed heartily and said, flying to the sky is the thousand-year aspiration of our Zhonghua; today, even if I am pulverized and my blood stains the sky, I must blaze a path for posterity to explore the heavens. You need not fear, quickly ignite the fire!"

Seeing this, the servants had no choice but to ignite the fire at Tao Chengdao's request.

Moments later.

With a loud bang.

Tao Chengdao was propelled into the sky by the rocket's thrust.

Following the second phase plan designed by Tao Chengdao, the gunpowder was ignited, continuing to elevate the device's height.

However, just as the disciples and servants on the ground began cheering.

There was a deafening explosion.

In the sky, Tao Chengdao and his device turned into a fireball, quickly plummeting from the air...

The first human "astronaut" attempting to ascend by rocket thrust perished thusly, and Tao Chengdao's disciples and servants buried him at Wanjia Mountain...

Yet, although Tao Chengdao tragically died in his pursuit of dreams.

His heroic deeds have continuously inspired generations of our nation's aerospace people and earned recognition in today's global space industry.

Internationally acknowledged as the first historical figure to attempt a manned flight with rocket propulsion, the International Astronomical Union even named a lunar crater "Ten Thousand Households" to commemorate this great individual.

If Wang Bing, Zong Ze, and Zhang Shuye represent the spirit of Huaxia.

Then what Tao Chengdao embodies is the spirit of knowledge exploration by the forefathers.

Among those forefathers' silhouettes, naturally, Old Su, the greatest scientist of the 11th century, cannot be absent.

Every time he gazed at the heavens, there was one thought in his mind:

If humans could fly to the sky and look down on the earth, what a magnificent scene that would be...

Magnificent landscapes, the myriad forms of life, all could be embraced within sight.

Thus, a long, long time ago.

He attempted to create a wooden kite, hoping to utilize wind power to reach the skies and try to conquer the sky.

Alas, lacking sufficient knowledge theory, the notion of a wooden kite ascending to the heavens ultimately ended in failure.

Now with his body aging, Old Su already has a premonition in his heart:

His days are numbered, and this obsession is unlikely to come to fruition.

He might have to bid farewell to this world in a year or two with regrets...

But what he didn't expect was.

With the arrival of Xu Yun, certain things seem to have subtly changed...

Airplane?

Does it refer to the flying wheel, or the flying machine?

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 255 171 "The Things About Me Hand-Turning Airplanes After the Coup in the Great Song" (6.8K)\_2**

[ 844 words ]

Could any of these possibilities really bring a person into the sky?

To be clear.

An adult weighs at least a hundred pounds, and can weigh more than two hundred pounds.

Counting the weight of the carrier, the most conservative estimate is over 200 pounds, right?

How could such a heavy object possibly lift off into the air?

But Xu Yun had already proven his abilities before; his words shouldn't be easily dismissed...

Then Old Su paused for a moment, considering the importance of the matter of 'auspicious', and decided to learn more about the inside story:

"Xiaowang, is there a principle that can explain this thing you call an airplane?"

"A principle...?"

Xu Yun thought for a moment, then pulled out two sheets of paper from his pocket—he had mentioned earlier at the Fan Building that he always carried paper and a pen.

Then he held one end of the paper in each hand, letting the paper hang down naturally.

He asked Old Su and Xiaozhao:

"Your Highness, Sir, do you remember the experiment we did in class back then?"

Old Su and Xiaozhao exchanged glances, their expressions thoughtful, and after a moment replied:

"Of course we remember, it was called the Bernoulli principle, wasn't it?"

Xu Yun nodded:

"That's right."

Then he paused and continued:

"Your Highness, Sir, since you both remember the Bernoulli principle, could there be a possibility?"

"For example, if we replaced the paper with a fixed object, using techniques to create a significant speed difference between the airflows above and below....."

"In this way, couldn't we make the object float up like a piece of paper?"

Students with good memories should still remember.

Xu Yun had demonstrated the paper blowing experiment for Xiaoli when they first met.

Later, in class, Xiaoli specifically asked Xu Yun about it, and to explain it easily, Xu Yun casually demonstrated another high school experiment:

Hold one end of the paper in each hand, let it hang down naturally, and blow between the two papers.

As you keep blowing, you'll find...

The two papers actually stick together.

In the high school textbook, these two experiments are both attributed to the Bernoulli principle:

Look, the flow speed is high and the pressure is low above, so the paper floats up.

But in reality....

This is wrong.

The paper blowing demonstration Xu Yun did for Xiaoli had little to do with the Bernoulli principle.

Actually, this is a widespread misunderstanding of the Bernoulli equation.

Considering that some fools... cough, cough, the information barriers of lay readers, to put it simply:

The Bernoulli equation holds along the same streamline, not between different streamlines.

The direction the paper shifts depends not on which side the airflow is, but on the angle between the airflow direction and the paper, related to viscosity.

Initially,

The paper hangs vertically down.

Blowing air over the top of the paper will cause the right side air to be taken away due to viscosity.

As a result, a low-pressure area forms.

The presence of this low-pressure area causes the paper to float upward to the right.

As the paper floats, the streamline bends downward.

Eventually, it makes the streamline cling to the paper.

At this point, the airflow no longer travels straight ahead, but follows a downward curve, which is a vortex field.

Thus, the downward bent streamline creates a centripetal force, which lifts the paper up.

This effect is truly called the Coanda effect, not the Bernoulli principle.

Very simple and easy to understand, right?

Yet in high school classrooms,

when discussing airplane principles, teachers not only fail to explain the Coanda effect (a considerable number of them might not even realize they are wrong themselves), they often extend the paper example further.

That is, they replace the paper with a wing:

For a wing, the upper surface is more convex, so airflow speeds up over it.

This creates a pressure difference, which is the source of lift.

With this explanation plus the paper experiment, most people suddenly see the principle behind airplanes flying:

Oh, so airplane principles are this simple...

And so, a situation of repeated mistakes arises—the principle of airplanes is the Bernoulli principle.

Actually, if anyone cared to think about it, they could easily come up with two counter-questions:

First, why can stunt planes fly upside down?

Second, why does a kite, essentially a big flatboard, fly without power?

Of course,

one can think about these questions, but it's not advisable to challenge teachers with them in class.

Otherwise, you might end up with a reward of standing punishment and copying homework, and the unlucky ones may even get a scolding from the class teacher.

All in all,

up to now, including the Bernoulli principle, Newton's third law, the Venturi effect, the Kutta-Joukowski theorem, and many other modified laws, it's actually hard to perfectly explain the issue of lift.

Why airplanes can fly remains an unsolved mystery.

People say the Nobel Prize is distant, but actually, many common phenomena in life, if successfully explained, would seem to place the Nobel Prize within easy reach.

But on the other hand,

as mentioned long ago:

The Song Dynasty is not the 21st century, and for the basic understanding of the current era, some concepts don't necessarily need to be perfectly accurate.

A more general explanation is easier for people to understand.

Therefore, when Xu Yun was explaining the reason back then, he directly applied the Bernoulli principle to the paper.

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## **Chapter 256 171 "The Things About Me Hand-Turning Airplanes After the Coup in the Great Song" (6.8K)\_3**

[ 1,145 words ]

In a flowing fluid, the greater the velocity, the lower the pressure.

At present, to save trouble, he continued to extend the paper to the wings, still sticking the hat onto the Bernoulli Principle:

"Therefore, if we can in some way provide a large thrust in a short time, we might be able to send the aircraft into the sky."

"If the commoner remembers correctly, there is a technique within the Wind Spirit Moon Shadow sect called the Amplifier."

"This device isn't large, yet it can magnify an ordinary person's voice several times over, and it's not too difficult to replicate."

"If by then, Your Highness rides the aircraft and speaks to the masses through the horn, there's no need to worry about the remaining influence of the deposed emperor."

Upon hearing Xu Yun's words, Xiaozhao's eyes instantly brightened.

Although in the legends of various dynasties, it seems every emperor has some divine anomaly.

For example, Liu Bang cutting the white snake, Gao Huan's red aura and purple ether, etc., as if without some anomaly you couldn't become emperor.

But, frankly.

These so-called anomalies, most of them were rumors that emerged after ascending the throne, their authenticity is doubtful.

The truly divine appearances in the public eye have always been rare, even if there are any, they're most likely just coincidences.

But if one were to fly high into the sky during the enthronement ceremony, speaking 'Thunder Sound', it would truly be an anomaly in the open!

The effect would far surpass any general amnesty, a game-like morale +40 bug effect!

Thinking of this.

Xiaozhao couldn't sit still, and hurriedly asked Xu Yun:

"Mr. Wang, I wonder how much material the aircraft requires, and how long it would take to build?"

Upon hearing this, Xu Yun immediately assumed a thoughtful pose.

To be honest.

Though he's an old hand in the DIY circle, crafting an aircraft by hand in ancient settings is still challenging.

Just according to the halo tips.

The heaviest task is related to scoring and technical difficulty; hence, he had to propose the concept of an aircraft; otherwise, he could have just made a hot air balloon.

Speaking of aircraft, the type must be mentioned first.

Structurally, aircraft are mainly divided into jet planes and propeller planes.

The propeller plane is the most primitive powered aircraft, like those seen in old movies and documentaries.

It mainly uses the rotation of the propeller to push air behind, using its reaction force to move the plane forward.

Specifically, depending on the power, it can be divided into piston planes, turboprop planes, etc.

However, some aviation enthusiasts separate piston planes as a third kind of independent aircraft definition — this is a niche group.

Of course.

Though propeller planes have a long history, they haven't completely retired from the aviation stage, and currently account for about twenty percent.

Jet planes are now the mainstream model, like the civil airliners we take are mostly jet planes.

Compared to propeller planes, jet planes have more complex classifications.

For instance, they can be divided into turbojets, turbofans, turbo-propellers, and turbo-shafts, amongst others.

But don't look at the planes as high and lofty; a few types are quite easy to handcraft if you don't consider scoring.

For instance, the very simple pulsejet engine.

This thing is called Pulsejet in English, used in WWII specifically to launch the V1 missiles, targeted solely at John Bull.

Although from a modern perspective.

The Pulsejet has low power, large vibration, and noise, it's unstable, has a short and uncontrollable lifespan, and a narrow range of power output control.

But from a technical standpoint, the pulsejet engine is incredibly simple:

The main component is a tube, not even necessarily a seamless steel tube.

The front of the tube is blocked with a one-way valve to let air in, then insert a fuel pump and ignition, and it's ready to go.

At startup, compressed air is used to blow the front valve, combined with ignition, and it can start instantly.

Xu Yun handcrafted three to four simple pulsejets in his past life, achieving a thrust-to-weight ratio of over 500+.

However, given the lack of technical content in the design, the score would probably not be high, likely just a bit better than a hot air balloon.

Thus, after much hesitation, Xu Yun made a bold decision:

To design his own engine!

To be honest.

This is undoubtedly quite a challenging approach.

Although Xu Yun is familiar with combustion, having been responsible for relevant research at Chengfei after graduating in his past life.

Yet, this is the Song Dynasty after all.

Without supercomputers, or sophisticated production equipment, the conditions are vastly different from those of later generations.

Moreover.

Flow field analysis, compressors, turbines, rotor synchronization, clearance control, fuel lubrication, bearings, even the shape of the combustion chamber, all require absolute precision.

Conversely, blade processing, difficult in later generations, could be a bit easier since it's only about temporarily dealing with the enthronement ceremony.

Given the current technical level of the Great Song, it's relatively easy to use resources to produce blades with a lifespan of 60 hours.

But difficult as it is, Xu Yun has a vague premonition:

The rating of this task is crucial, the higher the better, it absolutely can't be done perfunctorily.

This premonition weighs on him deeply as if...

The beneficiary wouldn't be just him.

Thinking of this.

He couldn't help but look up, saying to Xiaozhao:

"Your Highness, in order to manufacture the aircraft, this humble one might require a lot of manpower and resources."

Xiaozhao generously waved his hand; he was never one for dithering:

"Mr. Wang, just say what you need!"

After a moment's thought, Xu Yun said:

"Firstly, a large quantity of iron ore, craftsmen of basic techniques, and an appropriate preparation site."

"Secondly, some rare resources, such as... meteorite, the more, the better."

The so-called meteorite refers to meteors.

Besides iron and nickel, meteors might also contain some rare metals.

Although these metals might not be particularly abundant.

However, the Great Song National Treasury's accumulation of meteors should be considerable, theoretically likely yielding some special resources.

As Zhao Ji's direct brother, Xiaozhao knew a bit about the palace's storages, thus he readily agreed:

"There are about a hundred meteorites in the palace, the small ones are the size of fruit kernels, the large ones as big as water tanks."

"If it's still not enough, I can contact the noble families across the country to meet Mr. Wang's needs!"

Xu Yun nodded in satisfaction, continuing:

"Additionally, a large number of mathematicians, like Mr. Tongyu, is also needed, the more the better."

"As for time... it would take at least six to seven months."

"Six to seven months..."

Xiaozhao repeated the timeframe, turning to Old Su.

Old Su thought for a moment, and said:

"Your Highness can temporarily preside over state affairs as a regent, not just half a year, but even a year wouldn't be a problem."

Xu Yun slightly nodded, this answer was within his expectations.

After all, Xiaozhao also needs time to subdue Zhao Ji's remaining forces, which isn't that easy.

Even the rightful Zhao Ji in history took over half a year to settle everything.

Suddenly, Xu Yun thought of something and added:

"Oh, there's one more thing that needs to be prepared."

"What is it?"

"The donkey at the Su Mansion."

.....

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Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 257 172 To the Glorious People (Part 1)

[ 1,525 words ]

In the 21st century.

Due to some industry barriers, whenever people mention engines, they often think of them in a grand and upscale way.

But in reality.

In some model aircraft circles, making your own aircraft engine is not a very rare thing, funding is positioned behind technology.

Take DIY turbojets for example.

A quick search on Bilibili will yield a lot of related videos, and some geek websites still have some data left.

The number of engines made at home by many amateur scientists can fill half a room.

Of course.

Some may ask why DIY engines are so prevalent?

This cannot be explained without mentioning a source of all evil:

Kurt Schreckling.

In early 1998.

This engineer-level enthusiast, after countless failures, finally got his first designed turbojet engine to successfully operate and it even proved effective in actual combat.

Thus.

He published a book that year called "Gas turbine engine for aircraft model", which has the Chinese name "Aircraft Model Jet Engine".

In it, he disclosed the specifications of an engine named FD3-64, which became the ancestor of all future DIY engines.

Since then, the process of making engines was pretty much set.

Like a fishing rod.

With the development of the fishing industry over the years, how to install the reel, string up the line, and bait the hook are all standard routines.

The only differences are whether to use a baitcasting reel or a spinning reel, what line to use, and whether to use five grams or ten grams of bait, and which market to buy fish from if you come back empty-handed, just "parameter calculations" really.

Indeed.

The industrial level of later generations is much higher than that of the Song Dynasty, for example, five-axis CNC machining centers and wire-cutting are difficult to achieve.

But on the other hand.

As mentioned before, Xu Yun's goal is very practical and he doesn't intend to leap ahead:

Firstly, the engine he designs won't immediately reach mass production level.

Secondly, the intended use for this aircraft is precisely for the enthronement ceremony, and its lifespan is only a few dozen hours.

No need to consider long-term durability, long-term deformation, popularization processes, or production line manufacturing.

With Xiaozhao's support, creating an engine with the power of the whole country is not a fantasy.

As for the engine that Xu Yun wants to design this time...

It is a rotary engine. (Note: Yesterday, I got the thrust calculations mixed up and inadvertently wrote down the bypass ratio, causing some friends to think it was a turbofan...)

The rotary engine, also called the radial engine, actually belongs to a type of piston engine.

However, unlike inline piston engine blocks.

The rotary type is where the engine block rotates around the output shaft, while the block of an inline piston engine is fixed relative to the output shaft.

The engine template that Xu Yun designed this time is the CJ-6, which is a radial air-cooled 9-cylinder engine.

However, some aspects have been optimized so that all aspects are slightly higher than pulse jet engines, such as increased impeller curvature, etc.

Specific parameters are as follows:

Compression ratio:  $6.1 \pm 0.1$ .

Main connecting rod strength ratio: 1.0032

Operational status: 2370 rpm

Piston stroke: 130mm

Advanced ignition angle:  $29 \pm 2^\circ$

Maximum gas pressure value: 57.2 kg/cm<sup>2</sup>.

Connecting rod length: 235mm

Crankshaft rotation radius: 63mm

Piston diameter: 105mm.

Crankshaft offset angle at maximum pressure:  $13^\circ$  (assuming the time from gas explosion to maximum value is 4/1000, stage 1 accounts for 12%, pressure rise accounts for 20%, the other dead point is  $11^\circ$ , I took the high value, by the way, this is a parameter from an engine I hand-built 9 years ago, tried in practical combat)

Of course.

Parameters are just parameters, they are just a small part of the whole design process of the machine.

There are also some data that Xu Yun cannot complete alone.

For example, cross-sectional thrust, reflection wave pressure of the vertical plate, etc.

This is why.

He sought the help of Old Jia and others through Xiaozhao.

Scientific research has never been a one-person affair.

.....

One night a week later.

On an open area in the Artifact Bureau.

At this moment, in the center of the open area, there stood a blast furnace similar to those used for smelting iron, about four meters high.

A pipeline was connected to the side of the furnace, on which was Old Su's self-invented self-priming pump.

Beside the blast furnace.

Xu Yun first looked at the sky to ensure there were no signs of rain, then turned to ask Siegfried:

"Master Qi, how's the equipment preparation going?"

Siegfried wiped the sweat from his forehead, steadied his breath, and replied:

"Mr. Wang, rest assured, I thoroughly checked it with the team yesterday, even tried to start it once, everything is perfectly normal."

Xu Yun glanced at the blast furnace again and said:

"That's good, Master Qi, this equipment is the core of our research this time, as significant as ears to a fat man, extremely crucial."

"Therefore, I entrust you to be extra diligent these days, ensure there are no mistakes."

Siegfried responded immediately with a puffed chest, full of energy:

"Rest assured, I'll be staying here and won't go anywhere until the task is done!"

Xu Yun finally nodded with relief.

In this construction process, there are two essential aspects with the same name:

One is "donkey."

The other is "aluminum."

That's right.

Aluminum.

Aluminum and aluminum alloy are the most widely used materials in aircraft manufacturing today.

As everyone knows.

By adding a small amount of Cu and Mg into ordinary aluminum, a type of MgCu<sub>2</sub> microscopic grain called the Laves phase forms inside the aluminum.

These grains, dispersed through the aluminum, increase its hardness and reduce its ductility, creating what is known as "hard aluminum," an essential material for constructing aircraft hulls and engine casings.

Of course.

From a convenience standpoint, engines can actually make do with cast iron to some extent.

After all, cast iron engines are quite common in later years and also cheaper.

But considering the technical level of the Song Dynasty, the performance of the hull is already quite reduced, down to a very rudimentary level.

Hence, from a performance perspective, Xu Yun still planned to design with an aluminum-ceramic combination to enhance stability.

However, by doing so, a problem arises:

Aluminum is an extremely rare metal in ancient times, and it's hard to find pure aluminum in nature.

According to historical records.

It wasn't until 1827 that Germany's Weller produced metallic aluminum by coheating potassium and anhydrous aluminum chloride.

The modern method for producing aluminum primarily relies on electrolysis, specifically the cryolite-alumina molten salt electrolysis method.

In this process, molten cryolite acts as the solvent, and alumina as the solute.

Carbon bodies serve as the anode, and liquid aluminum as the cathode.

With the passage of strong direct current, metal aluminum can be extracted at temperatures between 950°C and 970°C.

However, this process requires a substantial amount of direct current and a series of auxiliary steps.

Considering the power output of the generator manually created by Xu Yun, it cannot achieve this.

Therefore, after considerable thought, he decided to use an alternative method to produce aluminum.

This technique is derived from copper and iron smelting, using copper, carbon, and bauxite.

Its primary chemical reaction equation is:

At high temperature,  $3\text{Cu} + \text{Al}_2\text{O}_3 = 3\text{CuO} + 2\text{Al}$ .

In a sealed environment,  $\text{CuO} + \text{C} = \text{Cu} + \text{CO}$ .

At this point, some students might find it strange.

No way.

Isn't this a reaction equation that contradicts modern chemistry theory?

Because the chemical properties of aluminum are far more active than copper, aluminum cannot lose oxygen atoms and give them to copper, so this equation is entirely wrong.

Actually.

This reaction has a prerequisite condition:

In a sealed high-temperature-resistant container without free-state oxygen, copper and  $\text{Al}_2\text{O}_3$  are placed inside, and heated until the temperature rises to the boiling point of aluminum.

At this point, a minimal amount of  $\text{Al}_2\text{O}_3$  can instantly lose oxygen and turn into aluminum vapor, promptly detaching from the surface of the molten copper-oxide mixture.

The copper in the molten state is then forced to accept oxygen and become copper oxide.

So, if the small channels on top of the sealed container are opened promptly, allowing aluminum vapor to flow to another oxygen-free sealed container, cooling it results in the pure state of aluminum.

Considering that aluminum's boiling point is 2467°C, far exceeding even the 1600°C of iron smelting blast furnaces, Xu Yun used ethanol to produce acetylene these days.

You see, the initial alcohol and hydrochloric acid finally found their use.

Returning to reality.

Once everything was ready.

Xu Yun looked at Siegfried and said:

"Master Qi, let's begin."

Siegfried nodded to him and personally walked to the furnace, lighting it at the low arch entrance.

The oxygen for burning acetylene still comes from the industrial production of heating potassium permanganate, just like in iron smelting.

Acetylene burning in oxygen can reach 3600°C; therefore, soon, aluminum vapor began to be produced in the equipment.

Guided by the self-priming pump invented by Old Su, the aluminum vapor rose into the channel, surrounded by ice blocks for cooling.

Don't ask where the ice blocks came from; remember the sour plum soup earlier?

About half an hour later.

As the reaction proceeded, an extremely rare substance of this era appeared in another container...

Metallic aluminum.

However, the current metallic aluminum amount is just a small mass, far from meeting Xu Yun's requirements.

Thus, after handing over the site to Siegfried,

Xu Yun excused himself, heading to another courtyard of the Artifact Bureau.

.....

Note:

Remember what I said at the beginning? Every appearing item will be used in the end phase; this is why the protagonist had to go through so much trouble earlier. My goodness, holding it all in was tough...

There will be another chapter later on, a bit delayed.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 258 173 To the Glorious People (Part 2) (5.6K)**

[ 812 words ]

A little over a week ago.

After deciding to build the aircraft.

Xiaozhao quickly fulfilled his promise:

While preparing various mineral resources.

He swiftly organized a large team.

This team has a total of just over seven hundred people, with about half being craftsmen, totaling over three hundred.

Among the top artisans, aside from Siegfried.

There are three other exceptional craftsmen hailing from various places, equivalent of the 'Level 8 Workers' of the Song Dynasty.

This ratio is actually quite normal.

Take 1959 as an example.

At that time, there were over 70 million skilled workers nationwide, with just over one thousand three hundred recorded as Level 8 Workers by the Ministry of Machinery.

The first generation of submarines, the first missile, the first atomic bomb, and the first space satellite are all inseparable from the diligent efforts of Level 8 Workers.

At present, the population of the Song Dynasty is about one hundred million, far less than the several billion in later generations.

And the number of workers engaged in handicrafts is not as many as in later generations, but producing a few Level 8 Workers is still quite normal.

After all, the key to being a Level 8 Worker ultimately lies in their manual skills.

There is certainly relevance to mechanical and technological foundations, but it's not particularly close.

Some ancient crafts, such as filigree, and kingfisher feather art, are not any less demanding than the requirements for Level 8 Workers.

According to Xu Yun's plan.

In the latter half of the entire manufacturing process.

These skilled craftsmen will undertake crucial molding tasks, directly determining the aircraft's finish rate.

Aside from the artisan segment.

The other half of the team was recruited by Xiaozhao...

Number crunchers.

As mentioned before.

Scientific research is never a one-person effort.

Due to his past life experience, Xu Yun can rely on himself—or rather, must rely solely on himself for the engine design.

Because in this era, no one else has the ability to design engines.

But aside from engine design.

Many calculations require assistance from others.

This bunch of number crunchers were recruited from all over the country, led primarily by Old Jia.

Both Han Gonglian and Liu Yi held mid-to-high positions in the team.

Although they also lack knowledge in engines and fluid dynamics, their calculation skills are top-notch in this era.

In some cases, Xu Yun only needs to provide conditions and equations.

Even if some concepts are beyond the scope, a group of dozens or more can still come up with results through calculations.

During the three or four months from Empress Dowager Xiang's death to the coup, Xu Yun never missed a chance to impart new knowledge to Old Jia and others.

Recently, this even involved some—in part —calculus knowledge.

This team of number crunchers has also been settled within the Artifact Bureau, and Xiaozhao has planned out a large courtyard for them.

When Xu Yun arrived at the courtyard entrance, it seemed very lively:

Perhaps due to limited space.

Even though it was already nighttime, many tables were still set up in the courtyard, with hundreds of people doing mathematical calculations.

Among them were individuals quietly calculating data.

Also groups of three or four working collaboratively.

And some who seemed to have encountered problems, gathered quietly in a corner for discussion.

For example, near the entrance.

There were seven or eight scholar-looking mathematicians gathered, seemingly exchanging ideas.

Upon seeing this, Xu Yun moved to join them, listening with interest.

The first to speak was a middle-aged man in yellow, who pointed at two sheets of calculation paper on the table and said:

"Brother Ou, the valve thickness is one hundredth of an inch, and the nozzle section is set to tianyuan."

"The volume is determined, but why is the result of our calculations not entirely the same?"

A lean dark-skinned man heard this and extended a finger, drawing a line on a column:

"Brother Zou, in my view, you must have calculated the value of the so-called 'axial force' incorrectly."

"Its initial formula should be one-third, not one-quarter....."

The scholar in yellow, surnamed Zou, shook his head, stating:

"No, no, I followed the curve gradient equation taught by Mr. Tongyu, the value must be one-quarter; you are the wrong one....."

Listening for a while, Xu Yun roughly understood the mathematicians' problem:

In simple terms, it is a thrust calculation under the same push-pull ratio for unit sections.

Involves valve thickness and nozzle section, also concerns reflection and speed of sound.

When organizing the number crunchers earlier.

Considering some conceptual issues, Xu Yun specifically teamed up with Old Jia to create a guidance manual.

The manual defined some hyper-dimensional concepts,

Like gravitational constant being  $6.67259 \times 10^{-11} \text{N} \cdot \text{m}^2 / \text{kg}^2$ , speed of light being three hundred thousand kilometers per second, etc.

In other words, just follow these numbers, and report back with the answer.

The guidance manual is like a manual,

Ordinary number crunchers are assigned various data and directly calculate using related formulas.

But while formulas are fixed, certain scenarios don't clearly indicate which one to use.

Therefore, disagreements aren't surprising.

The two seemed to make valid points, with the surrounding scholars seeming to ponder uncertainly.

Just as neither man conceded.

The lean, dark-skinned scholar surnamed Ou suddenly noticed Xu Yun eavesdropping.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 259 259: Zhang 173: To the Brilliant People (Part 2) (5.6K)\_2**

[ 1,498 words ]

At this moment, Xu Yun, dressed in everyday attire, was mistaken by a scholar with the surname Ou as a member of the numerical calculation group, who then asked:

"Brother, what are your insights?"

"Me?"

Xu Yun paused slightly, and after confirming that the question was directed at him, he pondered for a moment and said:

"I dare not claim any profound insights, but I can barely judge the correctness of the direction of the problem-solving."

The scholar with the surname Ou exchanged a glance with the scholar surnamed Zou. They did not underestimate Xu Yun's age, as anyone who could enter this courtyard was no novice:

"Problem-solving direction? Please, brother, elaborate."

Xu Yun thought for a moment, gesturing the shape of a combustion chamber:

"According to the engine's design drawings, it is known that the intake port and the interface are level."

"From this, it can be inferred that the temperature within the combustion chamber must vary, meaning the temperature near the fire zone is higher than the front of the pressure wave."

"According to formula 39 in the manual, a pressure wave is a type of sound wave, and the speed of sound is functionally related to temperature."

"Therefore, when it rebounds off the section, the situation where a rear wave chases a front wave inevitably occurs, and can only be approached with a gradual curve."

Saying this, Xu Yun could not help but look at the scholar with the surname Zou:

"Therefore, I do not dare to assert that Brother Zou's data has no calculation errors, but at least I can confirm his reasoning is not wrong."

"If we repeat the calculations a few more times, we will surely arrive at an accurate value."

Clap clap clap—

Just as Xu Yun finished speaking, applause suddenly emerged from the side.

Xu Yun followed the sound with his gaze.

Unbeknownst to him, Liu Yi had quietly arrived at his side.

Liu Yi applauded while laughing:

"Mr. Wang has a clear mind and hits the mark with his words. His speech is concise and to the point, which I greatly admire."

Seeing Liu Yi appear, the scholars' expressions immediately turned respectful, and they respectfully said:

"Greetings, Leader."

Xu Yun also bowed his hands:

"Mr. Jinqu, it's been a long time."

Liu Yi returned the greetings one by one to everyone, then pointed to Xu Yun and said to all present:

"Several of you may not know, this is the famous 'Daily Update 30,000' Wang Xiaochun, also known as Mr. Coder."

"The 'Standard Manual' you've all been studying day and night is a work of Mr. Coder and Mr. Tongyu."

Upon hearing this introduction from Liu Yi, the scholar surnamed Ou was immediately taken aback and stood up solemnly:

"So it is the renowned Mr. Coder Xiaochun, I have long admired your name, forgive my rudeness."

Xu Yun also bowed slightly, appearing very calm.

It's the same old story.

'Daily Update 30,000' refers to Wang Lin, and what does that have to do with Xu Yun?

Afterward, he bid farewell to everyone, and strolled around the courtyard with Liu Yi.

"Mr. Jinqu."

Looking at the scholars calculating data by candlelight in the courtyard, Xu Yun asked proactively:

"Have things been going smoothly these days?"

Liu Yi nodded, casually pointing to the area where the calculators were most concentrated, smiling:

"Things have been going relatively smoothly, with team members coming from all over, ranging from disenchanted clerks to ordinary instructors of Meng Xue, and even some reclusive hermits."

"If not for His Highness's summon, everyone probably would find it hard to witness such a grand numerical spectacle in their lifetime, naturally cherishing it even more."

"Now we have calculated and verified more than fifty sets of data, averaging seven sets per day, which is much higher than the expected five sets."

Liu Yi's expression was somewhat emotional; he was indeed speaking from the heart.

Although ancient Huaxia produced many famous mathematicians, few truly made a name in history.

Except for a few isolated examples.

Most numerical scholars were just ordinary small officials or regular instructors in Meng Xue.

Even famous ones like Old Jia from that time have only a record of unknown birth and death dates in historic texts.

Let alone other ordinary people.

Therefore, upon learning that the Emperor...to be more precise, the Court had invited them, along with generous subsidies.

Almost all numerical scholars who received letters accepted the recruitment.

In a certain sense.

Such a scale of mathematicians working collectively on calculations had never been seen before, not just in the Song Dynasty, but throughout history.

Therefore, Liu Yi calling it a grand spectacle was indeed sincere.

Then Xu Yun thought for a moment and asked:

"Mr. Jinqu, where might Mr. Tongyu be?"

The night was somewhat dim at this time, Liu Yi looked around, then pointed to a quiet corner room:

"Mr. Tongyu is in that room, Mr. Wang, shall we go and have a look?"

Xu Yun nodded:

"Much appreciated."

Following Liu Yi's lead, the two quickly arrived at the door of the room.

However, Xu Yun did not rush to knock on the door.

Instead, he went to the window and peered inside through the meticulously placed glass.

As soon as he saw the situation inside the room, he was a bit stunned:

Inside this approximately forty-square-meter room, stacks of calculation papers were piled up.

Some calculation papers were neatly packed and placed in a corner.

Others were scattered haphazardly on the floor.

At the two tables in the room sat Old Jia and Han Gonglian, both engrossed in calculations.

From time to time, they would yawn and rub their eyes.

But they quickly regained their focus and continued working.

From their demeanor, it was easy to discern that these two expended far more energy than ordinary calculators.

Seeing this, Xu Yun couldn't help but turn to Liu Yi and ask:

"Mr. Jinqu, this is...?"

Liu Yi hesitated for a moment, let out a quiet sigh, and said:

"Mr. Wang, the manual you and Mr. Tongyu authored is good, but ultimately, it's just a lifeless object."

"Just as you saw earlier, some situations are bound to cause disputes during actual practice."

"Therefore, Mr. Tongyu came up with a method to divide each task among three groups for calculation. Each group first engages in discussion to determine a unified number for reporting."

"If all three groups report the same number, it is temporarily compiled to await Master Qi's practical verification."

"But if any of the three groups reports a different result, it is handed over to Mr. Tongyu and Mr. Yang Huai for re-verification."

"Certainly, this approach will inevitably lead to some errors, but it's already the best method we can do."

Xu Yun said nothing upon hearing this.

After a while.

He looked at Liu Yi thoughtfully, especially lingering on his eye bags for a few seconds, a flash of understanding crossing his mind:

"Mr. Jinqu, you are likely one of those responsible for re-verification too, right?"

Liu Yi pulled a smile at the corner of his mouth and said:

"There's no choice, the six of us who attended classes at Su Mansion are the only ones capable of re-verification right now."

"Mr. Wang, did you know that on the day of the team's formation, Mr. Tongyu had already left behind a will?"

"Just yesterday, Mr. Yang Huai welcomed a newborn at home, yet he didn't take leave to go to his family."

Then he turned around and looked at the face illuminated by candlelight in the courtyard:

"Mr. Wang, it's not just the six of us; the entire team of calculators numbers three hundred and thirteen. Some may have made mistakes due to issues of ability, but not one has shirked or slacked off."

"We all know the truth, who isn't tired? Who wants to be tired? But this is flying to the sky!"

"Every ten-thousandth digit calculation we make may allow the plane to rise a foot higher."

"Huaxia, over thousands of years since the days of Yan and Huang, has never conquered the sky, but now, we have the chance to do so."

Saying this, Liu Yi looked at Xu Yun, and there was a sparkle in his eyes:

"Mr. Wang, Mr. Su once privately told us, your talent is unmatched through the ages, a rarity in the world. If you say it can, it truly can."

"We may not be able to keep pace with your steps, but we can give you a push as much as we can."

"We don't seek to be recorded in history, but merely wish to personally witness Huaxia's unprecedented journey to the sky, as Mr. Tongyu said when he wrote his will, to die without regret!"

Xu Yun quietly listened to Liu Yi's words, a special feeling surging unexpectedly.

He wanted to tell Liu Yi.

Actually, I am just a transmigrator from the future, possessing merely the relatively complete knowledge of the future.

The truly great and remarkable ones are not me,

But you, the great sages...

In the future, we have not only conquered the sky but have reached out to the cosmos.

The Mozi satellite and the Zhurong Mars rover are tributes and praises to the ancestors.

Thinking about this.

He couldn't help but gaze at the sky.

Tonight's starry sky was void of a single cloud.

The bright moon hung high, and the starlight was brilliant.

But in Xu Yun's view.

The starlight tonight was not in the heavens but here on earth.

December 8, 1100 AD.

Though there was no snow, it was when Huaxia's stars shone brightly.

.....

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 260 174: The Gift Left for Li Qingzhao (6.2K)**

[ 827 words ]

In the 21st century.

Aircraft parameters generally fall into two types:

Non-computable parameters and computable parameters.

The former is typically represented by aerodynamic data.

Friends who have participated in aircraft design should know this.

Due to the non-computability of some data, aircraft design often involves observations via wind tunnels.

For instance, tracer particles combined with laser sheet light can qualitatively observe flow field shapes, but it is not precise enough for quantitative flow field analysis.

To truly measure flow fields, PIV technology has developed in recent years.

Which involves using a high-speed camera to capture two consecutive images on the same section.

For the same particle.

There is a time interval between the two images, thus the change in recorded position allows for distance computation of displacement.

Knowing the interval of time between the two images, the particle's velocity can be calculated.

If the velocities of all particles on this section are calculated, a real-time velocity vector field is obtained.

By continuously capturing 100 images, the changes in velocity vectors can be seen, and this method collects flow field data.

So, against a modern background.

Designing an aircraft is quite difficult; costs will be very, very high, and most people simply can't afford it.

When a wind tunnel sounds, it means gold by the thousands, this is no joke.

However, the model Xu Yun is working on this time is very simple, so wind tunnel assistance for design isn't necessary, the main focus remains on computable parameters.

Thus, as time passes, the entire project continues steadily.

....

Four months later.

Still at the Artifact Bureau.

At this moment.

Xu Yun, along with Xiaozhao and Old Zhong, follows behind an elderly man in his seventies, walking slowly.

They walked like this for roughly a quarter of an hour.

After passing through a stern security line, a small house suddenly appeared before them.

The elderly man stopped before the house listening to pigs squeal, then turned respectfully towards Xiaozhao and saluted, saying:

"Your Highness, General Zhong, Mr. Wang, here it is."

Xiaozhao glanced around, nodded, and pointed to the door:

"Master Su, open the door."

The man with the surname Su hurriedly replied yes, took out a key from his sleeve, and opened the workspace's door.

He then made a gesture to invite them in:

"Please enter, this old chap goes first to lead the way."

The three of them followed inside.

This workspace covered about a hundred square meters, and a set of equipment was placed at its center.

About half of this equipment was related to distillation, the rest consisted of several glass vessels and numerous bottles and jars.

The size of the glass vessels was somewhat similar to 15-liter buckets from water dispensers; the kind that, with boys around, girls would say they can't lift, but when no boys are present, they'd lift it single-handedly.

At this moment.

Each glass vessel was filled with some transparent solution, appearing slightly viscous, not quite like water.

Floating within were some silver, chrysanthemum-like plants.

Beside the largest glass vessel, Brother Lv was panting as he spun it around.

Xu Yun walked over to the vessel, observing the internal situation carefully through its glass cover.

Then he casually fed Brother Lv a handful of grass and asked the older man:

"Master Su, how long have those Silver Chrysanthemums been immersed?"

The man with the surname Su paused for a moment, calculating the time mentally, and replied:

"About ten hours or so."

Xu Yun thought for a while and nodded:

"Let's let the donkey rest for a bit."

The Su Master he referred to, sharing the same surname as Old Su, was named Su Qi, an experienced master from the Zhejiang East Road Clothing Bureau.

Different from Siegfried.

Su Qi wasn't a craftsman, but he was extremely experienced with dyes.

The assembly module of Xu Yun's aircraft design comprised various segments, most equipment production required the skill of Siegfried-like elite craftsmen.

But certain segments needed professionals like Su Qi.

For instance...

The production of rubber-like materials.

Friends who slightly understand engine structure might know.

Besides steel, various alloys, or ceramics, engines have an essential material:

That is rubber components.

Examples include engine oil pipes, crankshaft oil seals, valve oil seals, O-rings, all requiring various rubber components.

Rubber's origin is Brazil, and according to the normal timeline, it will take hundreds of years more before being brought to Europe by Gaul explorers from America.

And it wasn't until the late 19th century that rubber finally became an industrial material.

Thus, at present in Great Song, it is impossible to find the standard meaning of natural rubber.

Of course.

Besides natural rubber.

There is a synthetic rubber category, but this requires enough material for polymerization reactions.

Even the simplest dimethyl butadiene is beyond the current reach of Great Song's industry.

However, being a physicist, Xu Yun indicates besides standard rubber, there are ways to produce rubber-like materials.

For instance, widely spread in later generations....

Eucommia rubber.

Eucommia is a unique monoculture plant in our country.

Eucommia rubber is a natural high-polymer material, also known as trans-isoprene rubber.

In the 21st century of future generations.

Our homeland is also heavily developing this material, its technical value is very high, and the prospects are quite broad.

However, Eucommia rubber's sensitivity in engine aspects is limited, its extraction process is also complex, even requiring the use of petroleum ether.

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## **Chapter 261 174 The Gift for Li Qingzhao (6.2K)\_2**

[ 816 words ]

Therefore, after careful consideration, Xu Yun ultimately chose another plant:

Silver Chrysanthemum.

Silver Chrysanthemum, also known as Silver Leaf Chrysanthemum, is a plant whose leaves resemble snowflakes and has quite an attractive appearance.

It is primarily distributed in the Yangtze River Basin of China, and is even more common than Du Zhong, with very low transport costs.

The silver chrysanthemum glue produced is also an excellent rubber-like product and is very suitable for engine applications. (DOI: 10.28077/n.cnki.nchgb.2005.001315)

At this moment, the first step of producing silver chrysanthemum glue was witnessed by Xu Yun and others:

They placed them in a sodium hydroxide solution for alkaline immersion to dissolve the cuticle using sodium hydroxide.

The sodium hydroxide needed for this step still comes from the initial electrolysis process.

As for Brother Lv...

It's naturally to provide centrifugal force to enlarge the contact surface.

Before Xu Yun and others arrived, Su Qi had soaked the Silver Chrysanthemum for a long time. After estimating that the time was about right, Xu Yun said to Su Qi:

"Master Su, let's start the next step."

Su Qi acknowledged, put on gloves, and went to a corner.

A moment later, he returned with a small tray.

At this moment, the tray was holding a pile of sticky white turbid liquid, emitting a faint stench.

Of course.

Do not misunderstand.

These things weren't liquids squeezed out but...

Crushed termite corpses.

That's right.

Termite corpses,

Termites are the main degraders of natural cellulose; their digestive tract contains a microorganism called protozoa, which produces a large amount of cellulase.

This cellulase can hydrolyze the cell walls of Silver Chrysanthemum, releasing the glue fibers.

Simultaneously, the termite bodies do not interfere with the preparation of Silver Chrysanthemum, and the cellulase does not react with sodium hydroxide, making it an excellent self-extraction material.

Once this step is complete.

Simply reflux extraction, filter while hot.

After cooling, freeze at subzero temperatures for an hour to obtain the finished silver chrysanthemum glue.

After putting termites into the container.

Considering the long subsequent process, Xu Yun proactively asked Su Qi:

"Master Su, is there still refined finished product from before?"

Su Qi nodded and replied:

"The demand from the front was quite large, Master Qi and others took a lot of finished products, but some glue tubes were not taken."

"Please wait a moment, Mr. Wang, I'll go get them."

Upon saying this, Su Qi turned and walked to another corner.

A moment later.

Su Qi returned to Xu Yun with several glue tubes, handing them over:

"Mr. Wang, these are the previously made glue tubes, all processed according to diagram requirements."

Xu Yun took the glue tube, applied normal force, and pulled.

Under tension, the tube quickly became a thinner strip but did not break.

Xu Yun nodded in satisfaction and handed it to Xiaozhao:

"Your Highness, take a look?"

Xiaozhao, interested, took the tube and began examining it with Old Zhong.

A moment later.

Xiaozhao thoughtfully raised his head and said to Xu Yun:

"Mr. Wang, can this material be waterproof?"

Xu Yun smiled at him and replied:

"Of course it can."

Xiaozhao then tried to flatten the tube, his thumb and forefinger rubbing the glue surface, saying:

"If so, couldn't it be made into rubber shoes or rubber clothing?"

Xu Yun immediately raised his eyebrows, slightly surprised to look at him.

Unexpectedly, the first thing this Quasi-Emperor thought of was civilian applications, but he still affirmed:

"Your Highness nailed it, indeed, this is a good material for making rubber shoes."

He wasn't flattering Xiaozhao.

Rubber shoes and rubber clothing mentioned by Xiaozhao were indeed some of the early applications of rubber in daily life.

Although vulcanization is needed in between, it's quite impressive to think of that in a short period.

Initially, when natural rubber was brought back to Europe, it was mainly used for making toys and souvenirs; no one considered making rubber shoes.

It was not until more than thirty years later that Europeans realized its waterproof properties and suddenly understood its potential.

Meanwhile, beside Xiaozhao, Old Zhong was enthusiastically examining the rubber in his hand.

"Good stuff..."

As an army man, Old Zhong's thinking was evidently more inclined towards militarization, as he said to Xu Yun:

"Xiaowang, as you said, the original state of this material is paste?"

Xu Yun nodded affirmatively and said:

"That's right, when freshly refined, silver chrysanthemum glue looks like rice paste."

"Does it have viscosity?"

"Certainly."

Upon hearing his response, Old Zhong quickly asked:

"So if it is applied before the silver chrysanthemum glue solidifies, on weapons or axle joints prone to loosening, wouldn't it provide reinforcement?"

"Furthermore, if applied to the handles of knives and guns, it might reduce some wear on soldiers' palms..."

Upon hearing this, Xu Yun's eyebrows lifted again.

Well done.

As a renowned military strategist of Late Song, Old Zhong's military insight was indeed extraordinary, immediately thinking of rubber's role in cold weapons.

Totally.

Before the arrival of rubber tires—those buggy-level products—rubber's greatest use in industry and military was to bond weapons and reinforce equipment.

For instance, the long knives and spears commonly seen in Song Dynasty armies.

Despite appearances in films showing weapons as exquisite with various carvings.

But in reality.

The quality of weapons allocated to lower-level soldiers in ancient settings could never reach that depicted in films.

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For instance, in ancient times, sword handles were generally made of mulberry or jujube wood, while spear shafts were made of zhe wood.

The weapons equipped by elite troops might be slightly better, as they would be repeatedly soaked in oil during manufacturing, making them comparatively less abrasive to the hands.

But ordinary troops were not so fortunate.

Their weapons were basically just coated with raw lacquer on the outside and didn't involve any polishing or waxing; if they were unlucky, they could easily get splinters.

Therefore, the wear and tear on the palms and the webbing between the thumb and forefinger was very common throughout various dynasties and even affected many battles.

But if only they could apply silver chrysanthemum glue on the gripping parts...

As long as it was applied correctly, it could protect the palm without slipping.

Frankly speaking,

if such weapons could be widely used in the long term, the winning rate in ground battles could probably increase by at least ten percent!

A seemingly insignificant item can boost combat effectiveness by one-tenth, which is already a terrifying figure.

Of course,

Considering that silver chrysanthemum glue could not be mass-produced yet, Old Zhong and Xiaozhao's ideas were just potential materials, still far from practical application.

Afterward, Xiaozhao left Su Qi and Old Zhong on site, while he himself took Xu Yun out for a casual stroll through the Artifact Bureau:

"Mr. Wang, I wonder what the current production progress of the airplane is?"

Upon hearing this, Xu Yun took a piece of paper from his sleeve, unfolded it, and said:

"Your Highness, this is the progress chart of each department; the airplane is currently about eighty percent complete."

"Eighty percent?"

Xiaozhao raised an eyebrow with slight surprise; Xu Yun's reply was somewhat unexpected for him:

"Isn't this much faster than planned?"

Xu Yun chuckled; it was clear that he was quite satisfied with the progress:

"It's about twenty percent faster, thanks to the statistical group's efficiency being much higher than anticipated."

"Additionally, that donkey has been working very hard, grinding for ten hours a day."

Xiaozhao nodded in satisfaction, then thought of something and turned to Xu Yun:

"By the way, has Miss Li still not seen you?"

At the mention of Xiaoli's name, a complex expression flashed in Xu Yun's eyes.

During the coup that he led earlier,

he felt he didn't owe Xiaozhao, Old Zhong, Wang Bing, or even Zhao Ji any apologies.

After all, in the normal course of history, this guy directly led to the downfall of the Great Song, being among the biggest culprits.

Might as well topple him from the imperial throne in this lifetime; Xu Yun felt justified.

Thus, there were just two people who truly made him feel guilty.

One was Old Su.

Without a way to let Old Su personally witness the original timeline, Old Su was destined never to escape his own moral condemnation.

He would constantly question and blame himself, doubting the correctness of his actions, right up till the end of his life.

The second was Xiaoli.

Although Xiaoli didn't know the whole story yet, the reason Old Li was imprisoned was plain:

Under the base of the microscope's secret compartment, Zhao Ji's name and birth date were found.

As someone who had often used the microscope at Old Su's mansion, Xiaoli, how could she not know that there wouldn't normally be a secret compartment under a microscope's base?

Additionally, by analyzing the subsequent events, Xiaoli could easily conclude:

Old Li was trapped and imprisoned by Xu Yun.

Although Old Li suffered little harm during the entire process and was eventually released.

Nonetheless, this was a psychological barrier for Xiaoli.

Therefore, after the whole incident was over,

Xiaoli no longer attended lectures at the mansion and rejected multiple visits from Xu Yun.

However,

she did take the microscope back to the Li Mansion once she learned that Old Li was unharmed — claiming it was a legal transaction as it was paid for by her.

At the same time, Xiaozhao also 'suddenly' became curious about biology, often asking Xu Yun questions on biological topics and sometimes having Xu Yun write them down, matters not for outsiders to know.

But ultimately, they could not meet...

Then Xu Yun paused, took out a three-to-four-centimeter-thick book from his person, and handed it to Xiaozhao:

"Xiaozhao, if it's convenient, please hand this book over to Miss Li."

Xiaozhao took the book, flipped through a few pages, and asked:

"Mr. Wang, the book seems to be all about biology?"

Xu Yun nodded and replied:

"Correct, it mainly contains knowledge on microbiology, records from the Wind Spirit Moon Shadow Sect, which should interest Miss Li greatly."

Xiaozhao closed the book, looked at Xu Yun with some confusion, and asked:

"Mr. Wang, Miss Li doesn't actually hold a grudge against you; it's just a matter of coming to terms with things in her heart, as you say."

"In a few months, once the situation stabilizes, with me as the mediator, the three of us can go out for a trip, and the gap will naturally close."

"Then, wouldn't it be better to give her the book at that time?"

Xu Yun remained silent for a long time, then shook his head with a complicated expression, persisting:

"Your Highness, please let the book be handed over by you."

With that said, he sighed slightly in his heart:

My time in this world is becoming scarce...

.....

**- Chapter 263 263: 175 Zhang: My Great Song is abundant in martial virtue, isn't having an air force a matter of course? (7.2K) -**

**Chapter 263 263: 175 Zhang: My Great Song is abundant in martial virtue, isn't having an air force a matter of course? (7.2K)**

[ 936 words ]

A few months ago.

After Xiaozhao's successful coup.

He transferred power to Old Su and Old Zhong, allowing them to placate the civil servants and military generals, stabilizing the situation in the capital city.

Meanwhile, he took Old Su's advice and went to the ancestral temple of the Great Song, crying and lamenting Zhao Ji's incompetence and misguided ways.

Initially,

some ancestral elders of the Zongzheng Temple, holding onto their principles, had quite a few grievances against Xiaozhao's actions.

Although they dared not criticize him openly, they privately expressed sarcastic and sneering comments nonstop.

However, once Xiaozhao presented the evidence and testimonies of Zhao Ji's intent to harm him, the overt criticisms diminished significantly.

Because the evidence Xiaozhao provided was not fabricated but authentic, straight from Zhao Ji's hand, raw and shocking.

Additionally, it's worth mentioning.

There was indeed no influence from the notable young man surnamed Wang, who used to write 30,000 words daily.

Following the normal trajectory, the prison case at Prince Cai's Mansion would break out in a year's time.

By then, Deng Duo and many of Xiaozhao's aides would be killed, and Xiaozhao would be confined, leading to the complete collapse of Xiaozhao's interest group.

Presently, Empress Dowager Xiang's passing had occurred four months earlier than expected, and Zhao Ji preemptively targeted Xiaozhao; this was indeed a reasonable occurrence.

After all, this seeding machine was never known for his patience.

Thus, under the charge of harming his siblings,

Xiaozhao immediately gained a relative moral high ground, receiving considerable understanding from many:

Zhao Ji's knife was clearly raised, how could Xiaozhao not resist?

Moreover, Xiaozhao was already the candidate with the most support for the imperial throne.

Then, he first rejected the request from Zongzheng to ascend to the throne.

Declaring explicitly he had no interest in money... cough, cough, in the imperial throne.

His happiest days were the ones spent drinking and carousing a few months ago, he had no desire for the throne.

However, on the other hand.

Considering the stability of the nation, Xiaozhao was still 'forced' to assume the role of regent as a prince, but it's only temporary.

About a month later.

Xiaozhao took the initiative to propose a suggestion:

Let his other brother, Prince Shen Zhao Bi, who is the eldest surviving prince, succeed to the throne, prioritizing the elder.

Though Zhao Bi had eye problems, his mind was still sound.

So, upon hearing the proposal the next day, someone went to the Prefect of Kaifeng to file a complaint.

The person claimed to be Liu the Fourth, lamenting that Zhao Bi had seized his family's land and something inappropriate happened with his daughter, pleading the prefect to uphold justice for the people.

And, surprisingly.

The Prefect of Kaifeng, who usually avoided getting involved in imperial family matters, suddenly seemed as though he had just attended a concert by Liang Jingru.

In broad daylight, the spirit of Bao Qingtian possessed him, summoning Zhao Bi to court.

Looking at the girl who was 150 cm tall, weighed 150 pounds, and had measurements of eighty each, Zhao Bi shed a tear of heartache from his blind eye, admitting his beastly conduct.

Thus.

Xiaozhao's first attempt to abdicate ended in failure.

And in the following days.

Several ancestral elders stood forth, one after another, praising and exaggerating Xiaozhao's unusual birth in grandiose terms.

By the time various rumors reached Xu Yun's ears, the scene was already somewhat akin to the finale of Ultraman Tiga:

Demons, aware of an extraordinary emperor's birth, flocking from all corners intending to extinguish Xiaozhao, with the imperial family barely holding on, Xiaozhao was finally born, and the people of the Great Song became light.....

In such a manner.

Xiaozhao rejected the request to ascend the throne three times.

His tone and demeanor were much like Van Persie's back when he declared, "If anyone is loyal to Arsenal, it's me," filled with firmness and sincerity.

Another month passed.

By the end of May 1101 AD.

Xiaozhao waveringly agreed to the ministers' fourth request, after contemplating silently for a full hour, "reluctantly" consenting to the suggestion to ascend the throne.

Then, after repeated studies by the Astronomical Bureau and Ministry of Rites, the timing for Xiaozhao's coronation ceremony was set.....

The third day of the seventh month in the fourth year of Yuanfu, the Hour of Mao for ascension.

Of course.

According to this native historical timeline.

The Song Dynasty actually does not have any reference to a fourth year of Yuanfu.

Because the era name in 1101, with Empress Dowager Xiang's passing in the second month, was changed by Zhao Ji to the first year of Jianzhongjingguo, renewing many from the Yuanfeng Faction.

But in this timeline.

Zhao Ji was pulled down by Xiaozhao at the end of last year, so the first year of Jianzhongjingguo naturally ceased to exist.

.....

After deciding on the coronation ceremony, on a day.

In a manor on the outskirts of Bianjing City.

This manor located over ten miles west of Bianjing City occupies a vast area, estimated to be over 100 acres.

The buildings within are luxurious and exquisite, with pavilions, towers, water pavilions, and viewing platforms all present, even several squads of guards rotating for duty.

At this moment.

Xu Yun was following alongside Xiaozhao and Old Su, heading in a certain direction.

Uncertain if it was just an illusion.

Xu Yun sensed that after not seeing him for a period, Xiaozhao's expression had less frivolity and more authority.

"Mr. Wang."

After walking a while, Xiaozhao pointed at the manor buildings and said to Xu Yun:

"You've been here for more than ten days, how do you find it?"

Xu Yun stopped walking, nodded approvingly:

"The manor is comfortable and serene, the orientation is ideal, truly a great place for retirement. Your Highness repays malice with kindness, the humble one is full of admiration."

Upon hearing this, Xiaozhao laughed heartily.

Xu Yun's words were not entirely flattering, as they genuinely reflected admiration as suggested by his expression.

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## Chapter 264 264: 175 Zhang: My Great Song is

## **abundant in martial virtue, isn't having an air force a matter of course? (7.2K)\_2**

[ 814 words ]

The purpose of constructing this estate was not for sightseeing or summer retreat, but to...

Imprison Zhao Ji.

Yes.

This estate of over four hundred acres is the resting place for the rest of Zhao Ji's life.

Perhaps from Zhao Ji's own perspective, he wouldn't feel any gratitude at all.

After all, even if you magnify it ten thousand times, it's still far less than the land he once owned.

In this former emperor's heart, resentment and grievance are the major feelings.

But from the observer Xu Yun's point of view, Xiaozhao's actions are indeed quite conscientious.

After all, according to the original trajectory, Xiaozhao was tortured by Zhao Ji quite severely.

Close followers, friends, and advisors were killed, and he could only pretend to be mad and foolish.

Even his sudden death had countless ties to Zhao Ji, barely mentioned in official history, hurriedly glossed over as sudden passing.

Besides, not to mention Zhao Ji's own crimes.

In Xu Yun's opinion, it wouldn't be an exaggeration to call Zhao Ji a national criminal.

The saying goes that even when you give something with open hands, the other party should at least reach out to take it, but Zhao Ji simply delivered himself.

Indeed.

Xiaozhao's actions surely have some embellishment, failing to showcase his genuine feelings.

Yet, even so, a compliment for repaying grievances with kindness is still deserved.

But the estate hasn't officially been 'handed over' to Zhao Ji yet, so Xu Yun, Xiaozhao, and Old Su came here today for another purpose.

The three of them walked for a short distance.

Soon.

They encountered a broad grassy field.

The grassland was about three acres in size, with very soft turf.

It seemed prepared for the enjoyment of Cuju.

However, due to unfinished construction, there were no goals and Cuju on the field, but instead there was...

An airplane.

Or to be precise.

A fully structured biplane.

That's right.

A biplane.

Upon seeing this, some of you might have guessed.

Exactly.

The model Xu Yun planned to imitate this time is the famous Po-2! (I suggest you search for pictures for better immersion)

Wooden framework, canvas skin, wooden fixed-pitch propeller.

So basic that all control cables are exposed on the fuselage, completely not conforming to modern aesthetics.

A few days of carpentry could solve various component issues on your own.

On the other hand.

This model is also the most sold and homemade type in later generations both domestically and internationally, many could reconstruct it with closed eyes to its exact specifications.

Guess how much a Po-2 costs in later generations?

Less than 30,000 Huaxia Coin!

And there're so many playing with Po-2 that some Da Mao even opened factories specializing in producing Po-2 engines, ordering phone +7-913-714-4883.

Although this aircraft design has no defensive elements, in this era, defending is not even a consideration for planes.

Even being on the battlefield.

Ground arrows simply couldn't reach it.

Moreover, the Po-2 might seem low-class to people in later generations.

But for people in this era, it is undoubtedly a formidable monster.

Take Xiaozhao and Old Su for instance.

Upon seeing such an object.

Xiaozhao, already with some Dragon and Tiger Qi becoming the Quasi-Emperor of the Great Song, showed a hint of surprise, curiously examining the giant structure.

Old Su couldn't suppress his curiosity, briskly approaching the Po-2.

Actively touched and felt it, then turned around and asked Xu Yun:

"Xiaowang, can this thing... fly in the sky?"

Xu Yun nodded, just about to speak when out of the corner of his eye he noticed something, smilingly pointing at the sky:

"Your Highness, Master, look over there."

Xiaozhao and Old Su instinctively turned their heads, looking in the direction Xu Yun pointed.

Upon seeing clearly, both took a deep breath, pupils dilated!

On the blind side of their vision, a Po-2 was leisurely flying over.

Indeed, another Po-2:

To ensure reliability, Xu Yun built two Po-2s this time, with three engines in total.

Being a Rabbit, always stable.

The Po-2 wasn't flying very high, roughly around two hundred meters, radently like a Bajaj.

In minutes.

The Po-2 slowly landed on the grass, leaving a long trace on the turf.

A little while after.

The plane's side door opened, and two men in iron helmets walked out from the two cockpit seats.

They jumped a few times in place, stretching their muscles, then removed their helmets, revealing the faces of brothers Wang Bing and Wang Yue.

Over a month ago, after a series of selections, the Wang Bing brothers finally became the first batch of trained pilots.

Some might question:

Isn't pilot training supposed to take a long time?

How come the Wang Bing brothers managed to handle it so quickly?

The reason is simple.

This was emphasized repeatedly before, and it is the core of the entire operation:

The plane designed by Xu Yun was primarily for Xiaozhao's coronation ceremony, not requiring endurance or mass production.

Not only were the engines short-lived, but the set flight altitude was also much lower than later aircraft.

If flying too high, the people below wouldn't see clearly, negatively affecting the promotion of flight.

The expected flight height by Xu Yun is around 300-500 meters, not exceeding 800 meters at most.

Thus, in designing the plane, he referenced the Wright Brothers' approach:

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## **Chapter 265 265: 175 Zhang: My Great Song is abundant in martial virtue, isn't having an air force a matter of course? (7.2K)\_3**

[ 1,241 words ]

Only a stopwatch, a wind speed meter, and a tachometer are placed on the console, and the ignition method is infinitely similar to the car's starting mode.

The equipment is simple, and the height is limited.

The practical operation is naturally much easier.

Friends who have passed the private airplane license test should know this.

In China, it usually takes three to six months to obtain a private pilot license through full-time study, and the actual hands-on time is even less.

The standard is 40 hours of flight training + 20 hours of accompanied flying.

Then add a few hours of transition, night flights, and instruments.

Finally, it's 10 hours of solo flying.

Some places might need more time, some less, but overall, this is about the number.

Not to mention the performance of the Wave 2 aircraft itself.....

Back then, a group of female pilots flew this aircraft to harass the German Army every night, directly creating a bunch of super female pilots with over 1000 combat missions...

Therefore, after simplifying the operation process.

Parachute training instead becomes the most difficult part.

Of course.

Simple as it might be, Wang Bing and Wang Yue were able to stand out from the candidate soldiers, so they must have talent.

It's worth noting that among the candidates, there's Zhang Shuye, the prototype of Lin Chong.

After getting off the plane.

Wang Bing and his buddy quickly walked over to the group and solemnly saluted Xiaozhao:

"Deputy General Wang Bing (Wang Yue), pay respects to the Prince!"

Xiaozhao hurriedly made a gesture to help them up, visibly not fully accustomed to the emperor's role, and then curiously asked:

"Captain Wang, I wonder if the plane is stable?"

Wang Bing had just gotten off the plane, his face still flushed, and upon hearing this, he quickly nodded and said:

"To the Prince, we have conducted six test flights successively without any anomalies!"

Old Su, observing the situation, couldn't resist but asking:

"Zheng Ru, can we see the ground scene from the air?"

A hint of shock flashed in Wang Bing's eyes, and he exclaimed:

"Indeed, it is magnificent beyond words; from the horizon, the earth and everything look as insignificant as sand and stone."

"From the plane, one can see infinitely far, all the beautiful landscapes!"

Upon hearing this, Old Su's face immediately showed envy.

Then he looked at Xu Yun and tentatively asked:

"Xiaowang, can the old man..."

But before he finished, Xu Yun shook his head and said:

"Old man, please be patient for a few more days, and wait until everything is debugged before you go up."

"...."

Old Su sighed gently, murmuring childishly:

"...Still not my turn....."

Xu Yun slightly shook his head inwardly.

In fact.

He had finished debugging all of Wave 2's data more than two weeks ago.

After all, there was a template from the future regarding the aircraft body, and there weren't many parameters needing adjustment. Siegfried's craftsmanship was also reliable.

Even the first flight of Wave 2 was completed solo by him.

If not, he wouldn't have let Wang Bing and Wang Yue do the test drive — sending two national heroes to conduct high-risk experiments would be spine-breaking, wouldn't it?

There's only one reason Xu Yun stopped Old Su from boarding:

He feared that once Old Su enjoyed the flight, the task would be settled on the spot.

This is not just his wild guess.

Back when the 1665 dungeon settled, he still vividly remembered Little Niu Yagen's leafy meal.

If that's the case.

He might miss Xiaozhao's coronation ceremony.

Having done so much in this era, if he returned to reality without witnessing Xiaozhao's coronation, even if the halo conducted simulations to compensate, something would feel missing inside.

Therefore, he dared not gamble on the halo's temperament but chose to delay Old Su's boarding.

Then Xu Yun thought of something and adjusted his expression before asking Wang Bing:

"Captain Wang, is the equipment debugging normal?"

Upon hearing this, Wang Bing remembered his task and quickly said:

"Everything is going smoothly; Zheng Chen and I conducted operations as you instructed, and the amplifier successfully amplified the sound several times over."

"Amplifier?"

Upon hearing this word, Xiaozhao suddenly thought of something and asked Xu Yun:

"Mr. Wang, is this the device you mentioned earlier, capable of amplifying my voice several times?"

Xu Yun nodded gently, affirming:

"Correct."

In his earlier plan.

Besides 'Flying in the Sky,' Xiaozhao will perform another 'Immortal Technique' at the coronation:

Spring Thunder Bursting from the Tongue.

To achieve this, the amplifier, or rather, a loudspeaker, must be used.

The amplifier, simple as it might sound, can also be complicated.

It first converts the human voice signal into an electrical signal, complete within the microphone.

But on the other hand.

A microphone generally doesn't have an external power source.

Meaning the energy of the output electrical signal is fully converted from the received air vibration energy.

This energy is usually very limited, so the electrical signal output by the microphone is feeble.

That's when a device needs to be used for amplification, the soul of the amplifier:

Transistor.

When mentioning a transistor, one must talk about a diode, also known as a vacuum tube.

Inside a diode is typically a filament, which emits some electrons when heated.

These electrons vary in speed, and a metal plate as the "anode" is placed far from the filament.

Clearly, when an electric field is created between the filament and the anode, this electric field can accelerate or decelerate electrons emitted from the filament:

Macroscopically, applying reverse voltage sends electrons back to the filament via the electric field.

Thus, there is no current between the filament and the anode, equivalent to an open circuit state.

With forward voltage applied.

Electrons are accelerated by the electric field and can reach the anode more smoothly.

This is an "electronic vacuum tube."

Building on the electronic vacuum tube, add a metal grid between the "filament" and "anode" and apply voltage between the filament and the grid.

Then, when the electric field established by this voltage weakens electron kinetic energy, the anode receives no current.

When this electric field accelerates electrons, more electrons reach the anode.

Because the filament and the grid are closer, the electric field intensity produced by the same voltage is higher.

Thus, a slight voltage change between the two greatly influences anode current, the amplification principle of electronic transistors.

Simple.jpg.

Of course.

The real challenge with a transistor:

It requires pulling semiconductor materials into "single-crystal" materials to be manufactured.

The PN junction inside a transistor uses a special process called molecular diffusion, impossible to produce manually.

But as said.

Xu Yun didn't need to consider mass production this time, only short-term efficacy.

So, he added a simple control between the diode's electrodes.

The grid construction is simple, using nickel via precision pressure in a glass stress feedback annealing furnace, an element he mentioned when demonstrating a dagger to Old Zhong.

As for the light pulling needed for the annealing furnace....

It was naturally supplied by Brother Lv.

Nichrome wire, after hydrogen treatment from electrolytic hydrogen production, got covered with barium carbonate on the outer layer—Don't ask where this came from, Xu Yun created barium chloride from heavy poison stone while producing sodium chloride, and barium carbonate naturally came easily (see Chapter 123, latter half).

This process formed a temporary material called 'oxide cathode.'

Wrapping it around copper wire serves transistor effects for a short time.

This type of transistor can probably be used for one hour, and swapping out repeatedly can last three to five hours easily.

Once confirming the amplifier's effectiveness, only one thing remains in the entire process:

Waiting for the coronation ceremony to begin.

Thus, in the subsequent period, the pressure on Xu Yun's shoulders lightened considerably.

Every day he had time for leisure walks, checking out ball games, and visiting the pricey greens...the leafy vegetables in the Fan Building, etc.

Just like that.

A month passed in a flash.

The time finally arrived....

The day of Xiaozhao's coronation.

.....

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Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 266 176: Farewell, Great Song! (8.2K)

[ 1,010 words ]

1101 AD.

Fourth Year of Yuanfu, July 3rd.

Today's hour is Yin.

In ancient times, Yin hour was roughly equivalent to three o'clock in the morning.

Generally speaking.

Even in a dynasty like Great Song without a curfew, by the Yin hour, all households would have already extinguished their lights and returned home.

Except for a few drunken people and night watchmen, there would hardly be any sound on the streets.

But today, Bianjing was an exception.

Not only was it not as quiet as usual, it was rather extremely noisy, and the air was filled with a sense of solemnity and murderous intent.

Hours ago.

A large number of organized troops had flooded into the city from outside and guarded all major exits, forbidding anyone from entering or leaving without permission.

Meanwhile, they conducted strict searches of the households near Vermilion Bird Gate, confiscating a large amount of privately owned weapons and knives.

The Imperial Guard Infantry's high-profile lockdown was not due to another upheaval in the imperial palace but because...

Today is the day Xiaozhao ascends the throne.

....

Outside the Kaifeng Prefecture Government Office.

The newly appointed Prefect Xie Wenguang was standing at the entrance of the government office, hands folded, solemn-faced as he looked towards the direction of the imperial palace.

Three years ago.

Lv Dafang, who had served as Prefect for ten years, passed away due to illness.

Both Emperor Zhezong and the succeeding Emperor Huizong chose to leave the post of Prefect vacant without formally appointing a new Prefect.

Of course.

The 'formal appointment' here was actually just a "temporary duty," rather than the "knowledge" of other official positions.

Because the position of Prefect of Kaifeng was very special:

It was a training post specifically established for potential successors from the Imperial Family or the Prince.

In the history of Northern Song, only four people truly 'knew Kaifeng Prefecture':

Emperor Taizong Zhao Guangyi, Prince Qin Zhao Tingmei, Prince Xu Zhao Yuanxi, and Emperor Zhenzong Zhao Yuankan.

These individuals were all heirs to the throne, except Zhao Tingmei died under mysterious circumstances and Zhao Yuanxi died of illness during his tenure.

Therefore, for the officials, the position of Prefect was at most a "temporary duty."

Following Lv Dafang's death, the vacancy for Kaifeng Prefect lasted until March this year.

At that time, Xie Wenguang was transferred back from Daming Prefecture by the regency of Xiaozhao to temporarily take charge of Kaifeng Prefecture and preside over the investigation of Prince Shen's "forcible seizure of civilian women" case.

Xie Wenguang was born in 1021 AD, only a year younger than Old Su, truly a living fossil-like elder.

As a Yuanyou Faction member who had once been dismissed for questioning reforms and writing letters to Lv Gongzhu.

Xie Wenguang never imagined that he, an old man with little time left, would witness a political coup in his life and be used again by the new emperor.

"King Jian ah..."

In the darkness, looking at the rows of torches in front of him, Xie Wenguang couldn't help but let out a sigh.

Probably no one would have thought before this.

In just one year, Emperor Zhezong and Empress Dowager Xiang would pass away one after the other, and the situation in the capital would change drastically.

The newly enthroned Prince Duan barely warmed his seat before being pulled off the throne and replaced with a younger new emperor.

Prince Duan was known for his incompetence and frivolity, which was widely acknowledged.

Although King Jian was universally recognized to have better character than Zhao Ji, who can guarantee that once he ascends the throne, he will necessarily be a wise ruler?

We can only pray that this blood brother of Emperor Zhezong does not betray his identity and can lead this empire, beset by internal and external troubles, forward...

"Ming Mansion...Ming Mansion..."

Just as Xie Wenguang's thoughts were running wild, a soft call beside him suddenly pulled him back to reality.

Xie Wenguang turned his head and found the caller was one of his subordinates, an officer named Zhang Bangchang:

"Sub-ability, how is the gathering of the populace going?"

Zhang Bangchang, who had just achieved the status of Advanced Scholar last year, was only 20 years old this year, and should have been trying out for the position of Token and Treasure Minister.

However, due to Empress Dowager Xiang's premature illness and Xiaozhao's political coup, he was temporarily placed under Xie Wenguang's command.

Upon hearing his superior's inquiry, Zhang Bangchang quickly cupped his hands and replied:

"Response to Ming Mansion, all 639 alleys in the capital have been duly informed, and within half an hour, they will be led by the Alley Chief to await the royal decree outside the alleys."

Xie Wenguang nodded slightly, stroked his beard, and said:

"Sub-ability, thank you for your hard work."

"Loyalty to the emperor is no cause for undue hardship."

Zhang Bangchang cupped his hands again, and under the torchlight, glanced at Xie Wenguang, tentatively asking:

"Ming Mansion, with Prince Jian ascending to the throne, the nation has its master, will last year's Advanced Scholars also....."

Hearing this, Xie Wenguang was slightly startled, then understood what his deputy wanted to ask, saying:

"Sub-ability, rest assured, I estimate it will not be even a month before His Highness issues a decree, by then I....."

Before Xie Wenguang finished his words, a group of soldiers rushed over from afar, with solemn expressions.

Leading them was a tall military man, who upon reaching Xie Wenguang, clasped his fists and said:

"Subordinate Palace Guard Chief Wang Ke, pays respects to Prefect Xie."

"Palace Guard?"

Xie Wenguang was somewhat surprised at the visitor's background, but instinctively returned the salute, simultaneously asking:

"May I ask what important matter requires this prefect's cooperation with your midnight visit from the palace?"

Wang Ke took out a decree from his person and handed it to Xie Wenguang, saying:

"Prefect Xie, this is a handwritten decree from the palace. His Highness specifically instructed when sending this, Prefect Xie is aged, no need to kneel, just read."

Xie Wenguang hurriedly performed a salute towards the direction of the imperial palace, then took the decree and began to read.

Moments later.

Xie Wenguang looked up with a complex expression, looking at Zhang Bangchang beside him:

"Sub-ability, His Highness has issued a decree, appointing you as Xuanzhan Shepherd in the outskirts of the Imperial Manor, with an official rank of Junior Seventh Grade."

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 267 267: 176 Zhang: Farewell, Great Song! (8.2K)\_2**

[ 854 words ]

"Responsible for taking care of Deposed Emperor Zhao Ji's living arrangements, do not leave the Imperial Manor without cause, set off immediately, no delays allowed..."

At the same time Xie Wenguang received the written order.

Several officials in residences or government offices in the Capital also received the same appointment as Zhang Bangchang.

If we were to look a bit further...

In Suzhou, quite some distance from Bianjing.

At this time, a father and son named Zhu Chong and Zhu Mi were also arrested late at night for causing trouble in their hometown....

.....

An hour later.

In another heavily guarded manor outside Bianjing City.

Xiaozhao sat solemnly in a secret room, lips moving slightly, much like a student cramming before an exam in later generations.

After a while.

A sudden knock on the door was heard from outside, it was Xiaozhao's personal attendant, the one involved in the Prince Cai's Mansion prison case, Deng Duo:

"Your Highness, Mr. Su and Mr. Wang seek an audience."

Xiaozhao promptly stopped reciting and said in a low voice:

"Let them in."

"Yes."

A moment later.

The door was pushed open, and Xu Yun followed Old Su into the room.

At this time, Xiaozhao had not officially ascended the throne, so Old Su and Xu Yun merely bowed slightly:

"Your Highness, there's less than an hour until the auspicious time. Please be prepared."

Xiaozhao nodded lightly and looked at Xu Yun, saying:

"Mr. Wang, how goes the airplane's calibration?"

Xu Yun saw the tension in this Quasi-Emperor, after all, it was his first time ascending to such heights, and replied:

"Rest assured, Your Highness, today's weather is clear with no clouds, nothing will go wrong!"

In truth.

According to normal royal ascension procedures, the Emperor doesn't need to go so far outside the palace.

They only need to worship at the Grand Ancestral Temple and Earth and Grain altar, then enter the palace through the East Splendor Gate.

With the first drumbeat, they receive the officials' homage along the east-west street, proceeding to the Grand Hall.

The saying 'Meeting the populace as you ascend the throne' is merely a formality.

During the entire coronation ceremony.

Ordinary people hardly see the Emperor, they can only hear the sounds of various musical instruments, gongs, and firecrackers.

However, this time Xiaozhao plans to make major news:

He intends to fly an airplane around Bianjing City, being seen by the people.

Meanwhile, using an amplifier to read the decree and ascend the throne in a manner as if descended from the skies.

It's safe to say.

Including the first Emperor, Ying Zheng, and all prior kings before him.

This manner of Xiaozhao's ascension can be considered the first of its kind in history!

This is destined to be recorded in history books and will surely leave endless questions for future generations.

Meanwhile, according to Xu Yun's setup, two made-built aircrafts will be launched.

But with a time difference:

First to take off is the 'Wanhu' piloted by Xu Yun with Xiaozhao aboard.

Their goal is to circle the city once, land at the East Splendor Gate, and complete the palace's ascension process.

After 'Wanhu' lands.

The 'Never Air Force' with Old Su and Wang Bing on board will then take off.

Old Su and the others will continue circling the city, allowing those who missed the first performance another chance to witness the 'miracle,' deepening the impression.

To sum up.

With everything at this step, all that's left is to wait.

"Xiaowang."

After leaving the room, Old Su gave Xu Yun a curious look, asking:

"Today's ascension is a joyous occasion, why do I feel you seem a bit melancholy?"

Xu Yun forced a smile upon hearing this, but said nothing.

Just as no one in this era knew history as well as he did.

No one now could truly understand his feelings.

Maybe an hour.

Maybe two hours.

In any case, today he would bid farewell forever to everyone in this era.

Indeed.

Goodbye forever.

Because unlike the 1665 dungeon.

The 1665 dungeon had explicitly told him:

His initial endeavor was merely a novice task, with a chance to reunite with Little Niu afterward.

But the Northern Song dungeon is a formal task.

This means that after he returns, there will be no further interactions.

Everything will be permanently sealed behind that door.

.....

Another hour passed.

The Ministry of Rites sent word that the auspicious time had arrived.

Already prepared, Xiaozhao, wearing a Crimson Gauze Robe, knee cover, Square Heart Collar, and Heaven-Reaching Crown, boarded the plane behind Xu Yun.

Xu Yun adjusted the instrument panel one last time and said to Xiaozhao:

"Your Highness, are you ready?"

Xiaozhao, with the written decree in one hand and the metal amplifier microphone in the other, nodded:

"Ready."

"Did you forget the aviator's term?"

Upon hearing this, Xiaozhao was startled, and then recalled the word Xu Yun had mentioned during practice.

According to Xu Yun, this word indicates readiness.

So he flashed a broad smile and said:

"Ou... Ohji Bake."

Hearing the last words he'd spoken in this era, Xu Yun took a deep breath and stepped on the pedal.

Yes, the pedal.

After all, to ignite the aircraft, one can't possibly resort to hand-cranking the propeller like the Wright Brothers?

That would be far too inelegant.

After a few minutes.

With the engine warmed up, the 'Wanhu' began to move.

It slowly taxied across the lawn, rolling further and faster.

When speed and lift reached a critical point.

Wanhu...

Took to the sky.

Summer days brighten earlier, and just after six, the sunlight dispelled all the darkness.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 268 - 176: Farewell, Great Song! (8.2K)\_3**

[ 1,037 words ]

**Chapter 268: Chapter 176: Farewell, Great Song! (8.2K)\_3**

"Truly beautiful..."

After the airplane ascended, Xiaozhao sat in the back seat, observing the scenery on the ground through the cabin.

The boundless vastness made him involuntarily feel exhilarated.

This is the territory of the Great Song!

"Your Highness."

Seeing Xiaozhao somewhat excited, Xu Yun maintained his focus on controlling the airplane and said:

"There is no one else around now, if you feel like it, you can shout out loud towards the distance."

"Don't ask me how I know, everyone has this urge the first time they fly."

"We're flying at a low altitude and a slow speed, there won't be any issue at all."

Upon hearing this, Xiaozhao was taken aback and was about to refuse when Xu Yun said:

"If you don't shout this time, after you ascend to the Imperial Throne, you might never have the chance in your lifetime."

Xiaozhao opened his mouth but eventually said nothing.

Indeed.

Just like Xu Yun said.

I'm still King Jian now, but after the plane lands, I will become Emperor Song.

With all the pressures and halos of succession, there might really be no room for indulgence then.

Besides, compared to others, Xu Yun knows almost all of my secrets, even my ascension was propelled by him.

Indulging once in front of him doesn't really matter.

Thinking of this.

Xiaozhao couldn't help but lift his helmet, expanded his chest, and shouted towards the distance:

"Hey—————!"

At the same time.

In the cockpit, Xu Yun also turned his head and shouted in a falsetto voice:

"Wuhu—————!"

A moment later.

Xu Yun gave a thumbs-up towards the rearview mirror, and both of them burst into laughter.

Then, the airplane flew on for a while longer.

As they passed over a mountain, Xu Yun suddenly said:

"Your Highness, ahead is Bianjing City."

"I... I see it."

Xu Yun was silent for a moment, then said:

"Your Highness, this humble one has a low status, but there are some words that I must boldly say, please grant your permission."

"Speak freely, no need to hold back."

"The Elder is aged and has limited energy, it might be difficult for him to assist in governance."

"In my humble opinion, Zong Ze and Zhang Shuye could assist in civil affairs, Wang Bing and Liu Fa could handle military duties, internal strife should be swiftly cut through..."

"If necessary, you can even use the words of Guo Jing, claiming that it has heavenly wings..."

Xu Yun rambled on for a while, and after Xiaozhao listened quietly, he suddenly said:

"Mr. Wang, are you planning on leaving?"

Xu Yun was taken aback for a moment, then sighed:

"Your Highness, there are rules within the Sect, I hope Your Highness can forgive me."

In the co-pilot seat behind him, Xiaozhao also sighed.

He was not a fool, he had already been speculating ever since Xu Yun entrusted a book to Xiaoli to hand over.

A wise man who opened the door of science for him, a dark hand that propelled him to the throne, a treasure trove that held countless wondrous skills...

If it were another emperor, perhaps they would rather kill him than let him go.

But Xiaozhao was different.

He was someone who had been through hardships, having suffered under Zhao Ji's persecution, he fully understood one's yearning for freedom.

At least for now, his heart wasn't that cold.

.....

And so.

The biplane slowly headed east, finally reaching the outskirts of Bianjing City.

According to ceremonial requirements.

When a Northern Song emperor ascends the throne, only the people near Vermilion Bird Gate need to kneel long-term.

Apart from this, most people only need to stand in line, serving as something akin to extras.

At this moment.

East of the city, Red Hair Lane.

Zhang San, along with his family, keeps looking towards the original point in the crowd.

Perhaps because they've been standing too long, Zhang San's younger brother gently tugged at his sleeve:

"Big brother, I'm hungry."

Hearing his brother's whisper, Zhang San first hushed him and cautiously glanced around.

After ensuring that the patrolling officers weren't looking their way, he quickly dug out a few broken pieces of biscuit from the inside pocket on his chest:

"Eat quickly, and keep quiet!"

Zhang San's brother stuffed the biscuit pieces into his mouth, swallowing with several muffled hums, then asked:

"Big brother, when will the auspicious things the lords mentioned arrive?"

Upon hearing this, Zhang San hesitantly shook his head.

He only knew that the auspicious event seemed to be related to their lord, but knew nothing of the specifics.

By the way.

Speaking of the lord, it's been quite some time since he saw Brother Wang, only recently receiving a book he sent...

Just as Zhang San's thoughts drifted,

he suddenly felt his previously soft and weak brother straighten up abruptly and start swaying vigorously in broad daylight:

"Big brother, look over there!"

Zhang San instinctively turned his head.

In the distant sky, there suddenly appeared a massive object, even eagles and falcons paled in comparison to its majesty.

Upon seeing this,

the young man, who had seen some grand events before, couldn't help but gasp, a realization flashing through his mind as he pointed to the sky:

"Look quickly, the auspicious sign, the auspicious sign has come!!!"

In reality.

At this moment, Zhang San was not the only one overwhelmed with excitement.

As the slowly approaching Wave 2 entered their sight.

The entire populace in the east of the city had virtually gone mad within a few seconds!

After all, before this, the patrolling soldiers had already given them a heads-up, informing them that an auspicious sign would surely appear in the sky today, and they were instructed not to fear upon seeing it.

Under such circumstances.

The people's first reaction to seeing the airplane was naturally not fear, but a mix of joyous surprise and awe at witnessing the shattering of their understanding.

In their experience, there was only one man-made object capable of flight, and that was the kite flown in early spring.

But compared to the incoming auspicious sign, even a fool could discern that there was no comparison:

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 269 269: 176 Zhang: Goodbye, Great Song! (8.2K)\_4**

[ 752 words ]

The auspicious sign is grand and thick, fundamentally immovable by the wind.

For such a celestial apparatus to ascend to the heavens, there is but one explanation they can conceive:

Divine Power!

Swish—

Almost without any coordination.

In mere seconds, a vast crowd of people, including many soldiers, had dropped to their knees!

After a moment.

A grand and clear chant began to slowly enter the ears of all those on the ground:

"The Emperor's minister, emboldened to use the mysterious sacrificial bull, proclaims to the august Emperor: For eight generations in the Song calendar, spanning a hundred and forty-one years."

"The former Emperor Zhao Ji failed to uphold the royal mandate, with celestial misalignments, and spiritual omens appearing. Those who foretold, considering the ways of the ancients, concur that the cycle has reached its end this generation..."

"All the Masters including Guo Jing and the barbarian chiefs declare: 'The celestial mandate cannot be refused, the divine implements cannot remain unused long, the ministers cannot be left leaderless, and the affairs of state cannot lack governance.'"

"The minister alone inherits the imperial image, how dare he not obey reverently..."

"After consulting the turtle shell oracles, the Grand Ancestor, the wise, valiant, and divinely virtuous Emperor appeared to the minister in a dream, revealing the divine path of the 'airplane', deemed auspicious, thus the minister now flies through the sky that all the common folk may witness..."

So it went.

Xiaozhao followed the flight path of Bo2, announcing as he flew, wherever he went, whether it was the common people or officials who disapproved, all yielded in reverence.

Indeed.

The divine phenomena of past monarchs were often mere market rumors, scarcely recorded even in unofficial histories.

But today, what of Xiaozhao?

Walking in the sky, his voice like spring thunder, how could one argue against this?

After half an hour.

Bo2, guided by ground markers, smoothly landed on the prepared grassy patch outside East Splendor Gate, where Xu Yun and Xiaozhao disembarked in succession.

Seeing the eunuchs and guards hastily approaching, Xiaozhao glanced sideways at Xu Yun, inquiring:

"Mr. Wang, are you really not coming with me into the palace?"

Xu Yun did not respond immediately but stepped back, bowing formally to Xiaozhao:

"This humble servant Xu Yun congratulates Your Highness on ascending the throne, celebrating for all the realm!"

"Xu Yun..."

Xiaozhao paused, nodding slowly:

"I... understand."

Then, recalling something, he added:

"Oh yes, the book you entrusted to me for Miss Li, she has received it and asked me to convey her thanks to you."

Having said that, he turned away, closing his eyes.

He held out his hands, allowing the attending eunuchs to arrange his attire.

After another quarter-hour.

The Minister of the Ministry of Rites, Li Qingchen, approached briskly:

"Your Highness, your attire is set, please enter the palace."

Xiaozhao nodded slightly, whispered a few words with Li Qingchen, indicating him to lead the way.

Receiving Xiaozhao's mandate, Li Qingchen signaled to the guards to disperse from Xu Yun's side.

Soon the ceremonial music played, and the retinue began moving towards East Splendor Gate.

"Your Highness!"

As Xiaozhao was about to step through the palace gate, Xu Yun finally made a decision, calling out loudly:

"In the book I asked Your Highness to pass to Miss Li, in the leather section at the end are several formulas, please use them with caution!"

Xiaozhao halted, but ultimately did not look back,

instead, as Xu Yun had done on the airplane, he raised a thumbs-up behind him.

Xu Yun remained standing there, watching Xiaozhao's departure.

Once Xiaozhao's figure disappeared, he sighed softly, turning towards the Vermilion Bird Gate where the common people gathered.

After another hour.

Old Su, piloted by Wang Bing, circled the city once more in the airplane, sparking another wave of exclamations and kneeling across the city.

Half an hour later.

The new Emperor ascended the city wall, praying for the state and its people.

The first quarter hour of the noon hour.

The ceremony concluded.

Xiaozhao, holding a ceremonial scroll, stood atop the city wall.

Amid the cheers, he waved to the tens of thousands of people below the city.

Somewhere unseen in the crowd,

Xu Yun too waved towards Xiaozhao on the platform.

As if bidding farewell to each other.

"Be a good emperor, Xiaozhao!"

.....

Then Xu Yun moved to a secluded corner and opened a transparent dialogue box.

At that moment.

The dialogue box boldly displayed the following message:

[Mission completed, please choose to return within 90 minutes, Wall-Facer]

[Countdown remaining: 115...114...113...]

Xu Yun continued to wait like that.

As the countdown reached the final second, he mentally declared:

"Halo, return..."

Moments later.

A halo enveloped Xu Yun, gradually transforming into particles, dissipating into the sky.

Farewell.

Old Su... Xiaoli... Xiaozhao... Wang Bing... Wang Yue... Zong Ze... Old Zhong... Zhang San... Old Li... Elder Xie... Yongzhu...

Oh yes.

And that donkey.

In any case....

Farewell, Great Song!

.....

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Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 270 177 Deduction Settlement (6.6K)

[ 911 words ]

After a wave of intense dizziness.

Along with a stream of particles drifting by.

Xu Yun's figure reappeared once again in that mysterious Halo Space.

Upon landing.

He glanced at his palm somewhat bewilderedly, then at the surrounding void, and sighed with complex emotions:

"Back again..."

And just as Xu Yun whispered to himself.

Shua——

That transparent light screen appeared in front of him once more, with the content just as before.

[Upon detection, 'Wall-Facer' novice task has been completed. Would you like to proceed with the evaluation?]

FBIWarning:

'Wall-Facer' is currently in a single-node mode for the settlement of the dungeon. Once settled, the Wall-Facer will be unable to resume the timeline. Would you like to continue?

Perhaps sensing Xu Yun's mood.

This time, the Halo didn't add any antics to the options, but instead presented two very standard options:

[Yes/No].

At the same time, there was a line of small text below:

[If the Wall-Facer chooses the negative option, the deduction stage will be automatically skipped and directly enter the settlement phase.]

Seeing this, Xu Yun took a deep breath and, without any hesitation, clicked on 'Yes'.

Ding——

[Activating evaluation system...]

[Permission verification passed...]

[Deduction begins!]

[High degree of task flexibility detected, this evaluation will directly undergo 'Meng Die' deduction!]

['Meng Die' deduction in progress...]

[Result generated!]

[The main storyline character summary is as follows]:

[Su Song]

[Initial Line]:

Su Song (December 10, 1020 – June 18, 1101), courtesy name Zi Rong, originally from Tong'an County, Quanzhou, Fujian Road.

Mid-Northern Song Dynasty official of Huaxia, a distinguished astronomer, astronomical instrument maker, and pharmacologist.

He led the manufacture of the world's oldest astronomical clock, the "Water Transporting Celestial Observation Platform", pioneering modern clock escapements.

Works such as "Herbal Atlas", "New Astronomical Instrument Manual", and "Collection of Mr. Su" have been handed down through generations.

[Dungeon Line]:

Influenced by the 'Wall-Facer'.

Su Song did not die at the original point in time; after participating in the 'Restoration Reform' initiated by King Jian Zhao Si, he was reappointed as Prime Minister in July 1101 AD.

However, due to being in a long-term state of self-doubt about the coup, Su Song ultimately fell ill and died in office in March 1102 AD.

Before his death, Su Song compiled his sorted physics manuscripts into the publication "Introductory Theory to Physics", later called the 'Cornerstone of the Macroscopic World'.

In commemoration of this giant of the era, the reflective telescope he led in fashioning was named 'Su's Telescope'.

This object was introduced into Europe with the expansion of the Northern Song Empire, advancing European astronomy ahead of time.

Renowned European physicist Newton once said in evaluating the Su's Telescope:

"Wished I were born five hundred years earlier, only to grind ink and prepare paper for Mr. Su."

AD 1343.

Su Song's descendant Su Tong led the first successful circumnavigation, the first to realistically prove the Earth is round.

[Main character comprehensive score]:

Historical correction: 6

Theoretical influence: 47

Character positive-negative value: -13 (affected by emotional state before the main character's death)

Comprehensive score: 40.

"Old Su...."

Xu Yun remained silent for a long time, remorsefully shaking his head.

Though he fulfilled Old Su's dying wish, it seems that in this timeline, Old Su's melancholia before passing far exceeded that of the original history.

This is the only thing that Xu Yun feels regretful about:

Given sufficient time and resources, he can easily ascend to the heavens or descend into the earth, yet he finds it impossible to prove his methods correct.

Then Xu Yun took a deep breath, temporarily setting aside the guilt within, and continued to look at the deduction results.

[Non-main character associated deduction results]:

1. [Li Qingzhao]

[Initial Line]:

Li Qingzhao (March 13, 1084 – 1155), styled Layman Yi'an, from Zhangqiu, Qizhou, Song.

A Song Dynasty female lyricist, representative of the Wanyue Faction, historically acclaimed as "the foremost talented woman of all time".

She was married consecutively to Zhao Mingcheng and Zhang Ruzhou, leaving behind works such as "Li Yi'an Collection", "Collection of Layman Yi'an", and "Yi'an Ci".

[Dungeon Line]:

Influenced by the 'Wall-Facer'.

Li Qingzhao immersed herself fully in biological research and married Zhao Si at the end of 1102 AD, with whom she bore three sons and two daughters.

Throughout her lifetime, Li Qingzhao discovered hundreds of microorganisms and in the year 1142 cultivated the first medical penicillin strain in human history.

While dedicated to her scientific research.

Li Qingzhao also left numerous celebrated poems, represented by one "Summer Coup":

"In life, be a hero among humans; in death, be a valiant ghost. Even now, I long for Liu Ji, just like a tardigrade."

To honor Li Qingzhao's contribution to biology, the highest award in biology was named the Li Qingzhao Award in later generations.

## 2. [Zhao Si]

[Initial Line]:

Zhao Si (1083 – 1106), the thirteenth son of Emperor Shen Zong of Song, younger brother to Emperor Zhezong of Song Zhao Xu.

His mother was Empress Qin Cheng of the Zhu Family, whose historical cause of death remains a mystery.

[Dungeon Line]:

Influenced by the 'Wall-Facer'.

At the end of 1100 AD, Zhao Si launched a coup, overthrowing the rule of Zhao Ji, and assumed the regency.

He ascended the throne the following year, with the era name "Jianling".

After ascending the throne, Zhao Si diligently governed. After absorbing the remnants of the 'Pseudo-Emperor' Zhao Ji's power, he took a plane to the Western Front in the second year of Jianling.

With the mouth of 'Master' Guo Jing conveying the 'Celestial Mandate', he executed several treacherous ministers including Tong Guan, Qin Bo, and Peng Jihui, thoroughly solving the decades-old problem of phantom surplus troops in the Western Army attached to the Northern Song Dynasty.

After filling the bottomless pit of phantom surplus troops in the Western Army, Northern Song tax revenue saw a significant surplus, and Zhao Si simultaneously began to heavily develop scientific and industrial technology.

Share to your friends

Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 271 177 Deduction Settlement (6.6K)\_2

[ 1,029 words ]

Appointed a series of civil and military officials such as Zong Ze and Zhang Shuye, later known as 'Good Ministers' by future generations.

Year 1103 AD.

Zhao Si dispatched a secret army to take the waterways to Yilu, secretly penetrating the uninhabited areas of the Liao people's territory to fully exploit the nickel mine.

Year 1104 AD.

Zhao Si used the formula left by the Wall-Facer, utilizing a potassium nitrate and thermite reaction, to create saltpeter rockets and small thermite incendiary bombs.

Year 1106 AD.

The western front reignited.

Zhang San, a servant from the former Su Song Mansion, presented data on the diameter, twist, and angle of wire.

In July of the same year.

Siegfried, the chief imperial craftsman, used the related data to develop the first single-shot breech-loading rifle.

Zhang San joined the army with this firearm, killing indiscriminately on the battlefield, with his reputation as a lawless outlaw terrifying the Western Xia barbarians.

Seeing this.

Xu Yun couldn't help but sigh slightly.

Before leaving the dungeon, he left two contingencies in total:

One was the formula for the saltpeter rocket and small thermite incendiary bomb, tucked into the pages of Xiaoli's book, along with some other contents,

The second was a book he sent to Zhang San, which recorded some information about firearms.

He knew better than anyone the position of firearms in warfare, but he also knew what kind of change firearms would bring to the world.

Therefore, before leaving, he first left behind the aluminum production process by manufacturing airplanes—anyone with a little chemistry knowledge should know how important the thermite reaction is in industry and military.

This is the foundation and soul of manufacturing sophisticated weaponry. (No reader thought of this, how disappointing)

But at the same time,

He also left the choice to Xiaozhao and Zhang San.

Although he told Xiaozhao the formula information when he left, he didn't reveal or interfere at all with Zhang San.

If Zhang San wanted to live a simple life, the silver taels he left behind would be enough for Zhang San's family to live wealthy lives for a lifetime.

If Zhang San wanted to succeed in his career...

One can only say, this is history's choice.

Then, Xu Yun took a deep breath and continued reading.

...

Year 1109 AD.

The craftsman Siegfried successfully developed the first generation steam engine according to the diagrams left by the Wall-Facer, but Zhao Si did not choose to make it public and kept it for imperial use.

Year 1111 AD.

Zhong Shidao, with unstoppable force, led troops to capture Xingqing Prefecture and captured Emperor Chongzong Li Qianshun of Xia.

Thus, the Northern Song destroyed Western Xia.

January of Year 1115 AD.

In the north, Wanyan Aguda declared himself emperor and established the Jin Kingdom.

In autumn of the same year, Aguda led the Jin soldiers to seize the Liao's important town, Huanglong Prefecture.

Emperor Tianzuo of Liao led an army of 700,000 to attack, but was defeated by the Jin soldiers at Hubudagang, with the dead littered over a hundred miles.

From then on, Liao was severely weakened, unable to contend with Jin.

Year 1120 AD.

Aguda proposed a maritime alliance, willing to jointly attack the Liao Kingdom with the Song Dynasty, and hoped Zhao Si could send a princess to marry; Zhao Si sternly refused:

"How could a tigress marry a dog?"

Year 1122.

The Jin soldiers successively captured the Zhongjing Dadeng Prefecture and the Western Capital Datong Prefecture of Liao, and captured Emperor Tianzuo of Liao in 1125, leading to Liao's demise.

After capturing Yanjing.

Wanyan Aguda, filled with shame and rage due to Zhao Si's refusal five years ago, led troops to invade Taiyuan.

Year 1126.

Wanyan Aguda led 30,000 elite cavalry to arrive at Taiyuan City.

At the same time.

Zhao Si, who personally led an expedition to Taiyuan, picked up a Gatling gun on the city walls...

On that day,

With the support of dozens of biplane bombers built with the full power of the Northern Song and numerous firearms, Wanyan Aguda and Wanyan Zongwang were both killed on the spot.

The Jin Kingdom's army lost over 20,000 soldiers, exhausting their national strength.

Year 1128.

Zhao Si once again led a northern expedition, recapturing the Sixteen States of Yanyun.

Year 1131, the Jin Kingdom perished.

After the Jin's demise, Zhao Si slowed his pace.

He focused on developing the economy and industry, and established numerous official colleges such as the Hanlin Medical Officer Institute, Hanlin Agricultural College, Hanlin Imperial Workshop, Hanlin Business College, and Military Equipment Institute.

Simultaneously, he continuously promoted the concept of the Chinese Nation, allowing common people to venture overseas to make a living.

And by using Korea, conquered during the trip to Yilu, as a springboard, he discovered Australia, vigorously promoting the East Asian triangular trade.

Year 1139.

Zhao Si officially disseminated large amounts of technology to the public, with later generations generally defining this year as the initial year of the First Industrial Revolution.

Within a few years, the Song Dynasty's natural economic system and social ethics were greatly impacted, but due to the already complete external trade economic system, the commodity economy ultimately managed to transition successfully.

Year 1146.

At the age of 61, Zhao Si once again operated the military machine that had been prepared for over twenty years, conquering westwards.

Leveraging powerful firearms and abundant economic support, Zhao Si pushed all the way to Duotuling, annihilating more than 100,000 Europe coalition forces, primarily the Holy Roman Empire, in the Genoa campaign.

Just as Zhao Si was preparing to move his troops back to the capital, Gaul surrendered completely, forcing Zhao Si to expand the territory to Brest.

Year 1157.

Zhao Si passed away at the age of 74.

His temple name was Emperor Song Shengzu, with the posthumous title Wutong.

After Zhao Si's death, his son Zhao Lai ascended the throne, and the Great Song Empire's territory further expanded.

At its peak, it reached as far north as Lake Baikal, as south as Australia, and west to Britain and a small portion of African territories.

The Great Song Empire, founded in the year 960 AD, did not officially end until 1795 AD.

Spanning over 835 years, it surpassed the Zhou Dynasty's 791 years, making it the longest-lasting dynasty in Huaxia's history.

Additionally, because Zhao Si took only Li Qingzhao as his wife throughout his life, people of later generations often compared him with Emperor Xiaozong of Ming, Zhu Youtang, calling him the lovesick emperor.

Seeing this.

Xu Yun couldn't help but let out a heavy breath.

What can be said?

Share to your friends

Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 272 177 Deduction Settlement (6.6K)\_3

[ 1,083 words ]

Xiaozhao is awesome!

Then he pulled down the light screen and continued reading the remaining parts.

3. [Zhao Ji]

[Initial Line]:

Emperor Huizong of Song, Zhao Ji (November 2, 1082 - June 4, 1135), known as the Master of Xuanhe, the eighth emperor of the Song Dynasty.

Painter and calligrapher. The eleventh son of Emperor Shen Zong, and younger brother of Emperor Zhezong, he was successively titled Prince Suining and Prince Duan.

In the First Year of Jingkang (1126), when the Jin army was at the gates, he heeded Li Gang's advice and abdicated to Crown Prince Zhao Huan.

In March of the Second Year of Jingkang, both Emperor Qinzong Zhao Huan and he were taken captive by the Jin people.

In the thirteenth year of Jin Tianhui (1135), he died in Five Kingdoms City, at the age of 54.

[Dungeon Line]:

Influenced by the 'Wall-Facer.'

In the winter of 1100 AD, Zhao Ji was deposed by Prince Jian Zhao Si via a coup and later imprisoned in an imperial manor outside Bianjing City.

After spending several months coming to terms with reality, Zhao Ji focused his mind on literary creation, inventing multiple fonts such as "Skinny Gold Script," "Fat Gold Script," and "Ear Root Gold Script."

He and Cai Jing, who attended to his daily life, were known as the great masters of the literary field in Huaxia history.

Addendum: During his imprisonment, Zhao Ji fathered a hundred and three children, later earning the nickname "Song Dynasty Seeding Machine."

1147 AD.

Zhao Ji passed away, historically known as the Pseudo-Emperor.

#### 4. [Zhang Shuye]

[Initial Line]:

Zhang Shuye (1065-1127), styled Jizhong, was the grandson of Zhang Qi, a Northern Song general and minister.

During the Jingkang Incident, he led troops to defend Bianliang City, but after the failure, he was captured by the Jin Kingdom along with Emperor Qinzong.

He hanged himself en route, at the age of sixty-three.

[Dungeon Line]:

Influenced by the 'Wall-Facer.'

Zhang Shuye received a secret order from Zhao Si in 1103 AD to lead troops secretly to Yilu for nickel mining, during which he encountered the prince Gao Zheng who lamented the atrocities of Korea.

Later, Zhang Shuye, under Zhao Si's orders, led an army to conquer the Korean capital and captured the Korean monarch Wang Song.

He repeated Wang Mang's act of the Han Dynasty and renamed Korea to "Steal."

1105 AD.

Zhang Shuye broke into the Japanese gathering stronghold, capturing over forty thousand Japanese citizens, unexpectedly discovering suspected relics left by Xu Fu from pre-Qin times.

1124 AD.

Zhao Si appointed Zhang Shuye as the military commander of Lower Kogury, later granting him the title of Noble of Lower Kogury.

5. [Wang Bing]:

[Initial Line]:

Wang Bing (? - 1126), a native of Bianjing, styled Zheng Chen, a renowned general of the Northern Song.

In June of the First Year of Jingkang (1126), appointed as the Jiedushi of Jianwu Army.

In September, cut off from aid in Taiyuan, with soldiers and citizens starving, he fought street battles with weary troops even as the city fell, before drowning himself in the river after being wounded by dozens of spears, defending Taiyuan for over two hundred and fifty days.

[Dungeon Line]:

Influenced by the 'Wall-Facer.'

Wang Bing became one of the first pilots of the Great Song air force, proposing various effective aircraft improvement plans. Outside Taiyuan City, he flew the first bomber "Victory Swallow No.1" together with Wang Yue, killing Wanyan Aguda and Wanyan Zongwang.

After achieving numerous military exploits on battlefields everywhere, he was appointed air force commander of the Great Song, holding the rank of Senior Second Grade.

1158 AD.

Wang Bing died of natural causes, instructing his son before his death to bury a copy of the "Heaven-Peace Sword Technique," kept in his secret room for decades, with him.

## 6. [Jia Xian]

[Initial Line]:

Jia Xian, a mathematician from the first half of the 11th century in Northern Song China.

He wrote "Emperor Huang's Nine Chapters of Mathematical Methods" and "Ancient Algorithm Collection," but both have been lost.

According to "Song History" records, Jia Xian studied astronomy and calendar calculations under mathematician Chu Yan and authored "Emperor Huang's Nine Chapters of Mathematical Methods," "Unlocking Calculation Book," and other works.

[Dungeon Line]:

Influenced by the 'Wall-Facer.'

Jia Xian presided over the revision of the "Multi-Multiplication Algorithm Collection," which not only covered triangles and binomials but also preliminarily addressed the curvature problem, providing an important idea for the complete concept of Gaussian curvature presented by the later renowned mathematician Gauss.

1107 AD.

Jia Xian passed away in his sleep, at the age of 88.

Later, the "Multi-Multiplication Algorithm Collection" was collected by the Yanjing Museum, and copies were held by the British Museum.

## 7. [Donkey]

[Initial Line]:

The donkey belonging to Su Song (1096-1100), was made into roasted donkey meat before Su Song left Bianjing to return to Jingkou, tasting incredibly delicious.

[Dungeon Line]:

Influenced by the 'Wall-Facer.'

This donkey was incorporated into the Artifact Bureau, responsible for pulling various types of equipment, working ten hours a day.

To commemorate this donkey, the Da Song Science Academy passed a resolution specifically placing a copper donkey sculpture at the entrance.

The first cell observation, the first astronomical telescope, the first airplane, the first steam engine, and even the first gun were inseparable from this donkey's contribution.

In later generations, the Great Song Empire was also called the "Empire Driven by a Donkey."

8. [Wang Lin]

Uh...wait?

At this point.

Xu Yun couldn't help but rub his eyes.

Darn it!

What did I just see?!

Then he opened his eyes wide, only to find those two words still unchanged.

[Wang Lin]

[Initial Line]:

None.

[Dungeon Line]:

A mysterious figure recorded in unofficial history, rumored to have been born as a male actor but possessed boundless knowledge.

He had extremely close relations with Su Song, Li Qingzhao, and Zhao Si, rumored to have been involved in the matters behind telescopes and other inventions, yet mysteriously disappeared after Zhao Si ascended to the throne.

According to unofficial history, it is suspected that this person died at the hands of Zhao Si.

However, later generations led by a fujoshi author named 'Stem Shooting Jasmine' from the CP party believe Wang Lin did not die:

He was secretly taken into the palace by Zhao Si and became a forbidden plaything. Related fanfiction is highly viewed on various forums.

Xu Yun:

"??????"

What the heck?

Male actor?

Thinking of this.

Xu Yun suddenly recalled the looks from Old Su, Mr. Xie, Yongzhu, and Zhang San at the beginning of the dungeon.

"Damn it...."

However, before he could finish speaking.

The light screen in front of him suddenly changed.

[Simulation concluded, starting settlement...]

.....

Note:

The dungeon is complete, everyone give it a score from 1 to 10, just leave a comment here.

Also, a sincere thanks to the Wolf of the History Department... oh no, the Wolf of the History Department for the help, many ancient things I didn't know I directly bothered him.....

Share to your friends

Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 273 178 Unprecedented Task Reward (6.6K)**

[ 844 words ]

Looking at the settlement prompt that appeared in front of him.

Xu Yun had no choice but to suppress the urge to vent his frustration for the moment.

A male actor is a male actor, whatever.

The event has already occurred, and it's pointless to dwell on it.

For now, the more important matter is to get through the settlement process.

Then he held his breath, concentrating as he waited for the settlement page to refresh.

A few seconds later.

The light screen changed again:

[World line simulation complete, '1100' dungeon permanently closed.]

[Task Name: Stir Things Up!]

[Dungeon Initial Time: 1100.6.28]

[Task Duration: One and a half years]

[Task Difficulty: ★★☆☆☆-★★★★☆]

[Task Requirement: Fulfill Su Song's wish before his death.]

[Task Reward: Based on score]

Task settlement in progress...

Ding!

[Dungeon Completion Time: 1101.7.03]

[Task Completion Rating: ★★★★★]

[Task Completion Score/Expected Completion Score (Weighted Value): 1187/29]

[Task Evaluation: Xu Yun is someone you can work with; when needed, he truly delivers!]

[Task settlement in progress... Rewards determined!]

A moment later.

Eight small light orbs quietly appeared in front of Xu Yun.

Seeing this, Xu Yun was momentarily taken aback.

Eight?

Impressive.

This arrangement, the eight small light orbs in front of me...

Seem to all be task rewards?

He remembered the rewards for the previous beginner task clearly; there were only three:

Little Niu's 30-minute Thought Experience Card, the Real-Life Mystery Egg, and the Fifth Generation Imidacloprid formula.

Among them, Little Niu's Thought Experience Card was used by him to deduce the cockroach sodium ion channel receptor equation, which was put to good use.

There were two Mystery Eggs.

One was Anta in Little Niu's portrait.

The second was that Pascal's Triangle in the real world was replaced by Yang Hui's Triangle.

The remaining formula for the Fifth Generation Imidacloprid was of greater value, which even caused a big news event about pest control at Ke Da, leading to Cai Cai Zi's elimination.

Predictably.

When he returns to reality, Imidacloprid can officially begin production.

So among the eight light orbs this time, what rewards might there be?

Old Su's Thought Experience Card?

Or perhaps some sort of real-life mystery egg?

At this point.

Xu Yun couldn't help but extend his hand and pointed toward the first small orb.

Pop~

The small orb burst like a soap bubble the moment Xu Yun's finger touched it.

After bursting, the orb transformed into a silver beam of particles, which quickly converged together, then drifted toward...

The door representing the 1100 dungeon.

Swoosh——

The closed door quickly absorbed the particle beam, and a few seconds later, the door suddenly began to change:

The solid door seemed to lose gravity, suddenly floating up from its base, hovering in the air.

Then it started to spin and shrink, finally turning into a golden number:

1100.

This number slowly floated to the edge of the halo and continued drifting inward.

Eventually, it stopped at the very center of the halo, hovering about a meter off the ground, perfectly still.

Xu Yun watched, puzzled, as he walked over to the edge of the halo.

He reached out and gently touched the number.

The moment his fingertip touched the number, the surrounding environment abruptly changed again.

When Xu Yun came back to his senses, he found himself in....

Bianjing!

The surroundings were exactly as they were before he left, except now he was standing on the city wall, with Xiaozhao beside him waving downward.

But quickly, he realized something was amiss:

The people in this time and space...

Couldn't move.

Meanwhile.

A light screen appeared before him again:

[Space-Time Album:]

[Captured from the moment of greatest emotional fluctuation experienced by the Wall-Facer in the dungeon, simply touching the number inside grants entry, with the Wall-Facer able to enter just once a day for no longer than 60 minutes, external time remains unchanged during entry]

[Album Capture Range: Bianjing City Main District]

"Moment of greatest emotional fluctuation..."

Next to Xu Yun, Xiaozhao waved a hand in front of him.

Indeed, no reaction.

He then tried to grab the Jade Seal from Xiaozhao's hand.

But just as he was about to touch the Jade Seal.

There was a sudden resistance at his fingertip, like a protective membrane, keeping his left hand away from Xiaozhao.

"It seems I can't touch people's bodies either....."

Xu Yun calmly withdrew his hand and looked beyond Xiaozhao.

There, Old Su, Old Zhong, and Wang Hou stood at the very front of the courtiers, solemnly watching Xiaozhao's back.

Xu Yun sighed, clasping his hands towards the three, then turned and walked along the corridor of the city wall.

The corridor was heavily guarded, but no soldier could stop him.

When he reached the foot of the city.

Xu Yun saw Wang Bing, Wang Yue, and others responsible for the guard, standing tall and imposing.

And behind Wang Bing and his brother, amid the dense ranks of courtiers.

Xu Yun found Zhang Shuye, Zong Ze, Old Li, and...

Xiaoli.

Xiaoli was holding a book in her hand, looking quite mischievous.

At the time of the screenshot, she must have been glancing around, mumbling about the tedious process, eager to go home early to conduct experiments.

And that book...

Was precisely the booklet Xu Yun had asked Xiaozhao to pass on.

The entire city of Bianjing resembled a VR album, eternally captured in this moment.

Seeing this.

Xu Yun suddenly smiled, a very happy smile:

"How wonderful...."

An hour later.

Xu Yun returned to the Halo Space.

He gazed at the golden 1100 for a while, then reached out and pointed at the second light orb.

Share to your friends

Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 274 178 Unprecedented Mission Rewards (6.6K)\_2**

[ 811 words ]

Pop~

Another bubble popped.

The light sphere transformed into a stream of particles, forming a familiar...

Golden Egg.

Clearly.

The second reward wasn't that special, it was an Easter egg like the last time.

The Easter egg in the 1665 dungeon had surprised him for quite some time; I wonder what this one will be like?

Based on the properties of the Halo.

No matter how much variation occurs in the parallel worlds of the dungeon, it seems there's little feedback on the already settled historical line of the real world.

After all, the reason it's called an Easter egg is because of its trivial 'size'.

It's just that I encountered quite a few people in the 1100 dungeon and also created a lot of things; I wonder which one of these will turn out to be an Easter egg?

With an expectant heart, Xu Yun waved his hand and the Easter egg naturally disappeared.

Then he pointed at the third light sphere.

After the photo album and the Easter egg, what kind of reward will it be this time?

Another crisp 'pop'.

A few seconds later.

An ancient-looking paper floated into Xu Yun's hand.

Xu Yun instinctively pinched it.

The hardness of this paper was much lower than Little Niu's Thought Card, so it shouldn't be a Thought Card item.

Sure enough.

When Xu Yun flipped it over, a large row of mathematical formulas appeared in front of him:

$$4D/B^2=4(\sqrt{(D1D2)})^2/[2D0]^2=\sqrt{(D1D2)}/[D0]=(1-\eta^2)\leq 1....$$

$$\{q_{jik}\}K(Z/t)=\sum(jik=S)\prod(jik=q)(X_i)(\omega_j)(r_k); (j=0, 1, 2, 3...; i=0, 1, 2, 3...; k=0, 1, 2, 3...)$$

$$\{q_{jik}\}K(Z/t)=[x_aK(Z\pm S\pm N\pm p), x_bK(Z\pm S\pm N\pm p), \dots, x_pK(Z\pm S\pm N\pm p), \dots]\in\{DH\}K(Z\pm S\pm N\pm p)....$$

$$(1-\eta^2)(Z\pm 3)=[\{K(Z\pm 3)\sqrt{D}\}/\{R\}]K(Z\pm M\pm N\pm 3)=\sum(ji=3)(\eta_a+\eta_b+\eta_c)K(Z\pm N\pm 3);$$

$$(1-\eta^2)(Z\pm(N=5)\pm 3): (K(Z\pm 3)\sqrt{120})K/[(1/3)K(8+5+3)]K(Z\pm 1)\leq 1(Z\pm(N=5)\pm 3);$$

$$W(x)=(1-\eta[xy]^2)K(Z\pm S\pm N\pm p)/t\{0, 2\}K(Z\pm S\pm N\pm p)/t\{W(x_0)\}K(Z\pm S\pm N\pm p)/t\dots\dots$$

The final formula... or rather a value is:

$$Le(sx)(Z/t)=[\sum(1/C(\pm S\pm p)-1\{\prod xi-1\})-1=\prod(1-X(p) p-s)-1.$$

Looking at this paper, Xu Yun frowned slightly:

"Is this.... the renormalization combinatorial coefficient and analytic continuation?"

"And infinitely layered symmetrical and asymmetrical logarithmic circles and topologies?"

"What's the purpose of this?"

Although due to time constraints, he couldn't immediately understand what was written on this paper.

But from  $(j|k=q)(X_i)(\omega_j)(r_k)$ , it's not hard to see that the final  $Le(sx)(Z/t)$  should be a ratio.

However, just knowing it's a ratio isn't sufficient, to be blunt, merely knowing this doesn't carry much meaning.

For example, the golden ratio is a ratio, an airplane's aspect ratio is a ratio, and pi is also a ratio.

Yet their application fields are vastly different, and the values they create vary significantly.

But...

Besides this paper, nothing else came out from the light sphere, not even the anticipated light screen appeared.

Xu Yun silently put away the paper, intending to return to reality later to study it carefully.

Then he turned his gaze back to the front and opened the fourth light sphere.

Pop~

With the light sphere's shattering, instead of Arsenal's team emblem, a large copper cauldron appeared.

The cauldron was initially only the size of a cola can, but quickly began to enlarge.

By the end, its height had reached nearly six meters.

A few seconds later.

The cauldron suddenly exploded in mid-air.

"What the heck!"

Unprepared, Xu Yun's first reaction was to cover his head with his hands, but soon, he realized there was no sensation of objects falling on him.

He looked around in confusion and saw that there was no trace of the cauldron in the entire space, as if it had never appeared.

In its place, there was a light screen:

[Congratulations to the Wall-Facer for obtaining an epic reward: National Fortune +1].

The confusion in Xu Yun's eyes deepened:

"National Fortune?"

What on earth is this?

And in the external world, which he temporarily couldn't access.

Almost at the same time.

From Zengmu Ansha in the south to Mo River in the north, a small rain suddenly started to fall across the country.

Normally speaking.

Winter rain is often wet and cold, hitting the face with a piercing chill, making one feel extremely uncomfortable.

But this rain was different.

It was neither mist nor line, neither tangible nor intangible, carrying a warmth that seeped into people's hearts...

Additionally, this rain came quickly and went quickly, lasting only about five minutes.

Many people hadn't even reacted before it stopped.

With the fall of this gentle rain.

Across the Shen Zhou Continent.

Some unknown changes began to quietly take place.

USTC.

National Synchrotron Radiation Laboratory.

As the first national laboratory in our country, Ke Da Tongfu, although it lacks equipment related to high-energy collisions.

In reality.

Apart from the large detectors at the collision point and the vacuum beam pipeline, other equipment can be considered almost identical to a collider.

The maximum electron energy after acceleration by this equipment is 800MeV, just reaching the GeV level, hence Tongfu often undertakes some acceleration measurements.

Today.

USTC's Zhao Zhengguo, an academician, was leading a team conducting a decay measurement on the transverse polarization of Lambda hyperons.

As is well known.

Lambda hyperon is the lightest hyperon.

It was first discovered in cosmic ray experiments in the late 1940s and got its name because it is heavier than a nucleon.

In 1956, Elder Li and Elder Yang proposed non-conservation of parity in weak interactions, suggesting the study of hyperon decay to test their idea.

Thus, Lambda hyperon has always been a cutting-edge research project.

For instance, this time.

Zhao Zhengguo's team spent three months polishing the plan, at a cost of nearly ten million in R&D, to finally conduct today's decay detection experiment.

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Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 275 178 Unprecedented Task Rewards (6.6K)\_3

[ 842 words ]

A fortune invested, all for that 0.67 millionth of a second.

At this very moment.

Zhao Zhengguo stands at the main control console, his expression grave.

This time last year, he also led a team for a decay detection experiment.

At that time, 570,000 decay cases were selected, but the angle distribution concluded with a maximum observable polarization of only 18%.

This was the standard of over four years ago internationally; the data held no reference value, belonging to an area of absolute delay.

Facing the massive equipment then, Zhao Zhengguo felt as if his heart was bleeding.

He had been elected as an academician as early as 2013, reaching the pinnacle of his career, even winning a technological progress award.

Therefore, his heartache was not for other reasons, but genuinely feeling guilty about the enormous funds wasted.

Now, leading the team for another challenging detection, how could the pressure not be overwhelming?

However, at this moment.

It happened to start raining on the ground.

A few seconds later.

Clang——

Inside the analysis room not far away.

One of his students suddenly rushed out, wildly waving sheets in his hand, exclaiming excitedly:

"Director Zhao, there's a decay case with a polarization degree reaching 27%, the decay parameter measurement for the  $\Lambda$ -hyperon is  $0.770 \pm 0.005$ , and the antihyperon's decay parameter is  $-0.752 \pm 0.009$ !!!"

"We reviewed the quantity using supercalculations three times, our maximum polarization degree broke through 26%, world... first break!"

Amid the frenzy inside the laboratory.

Expanding the view a bit more outside.

Thousands of miles away at Jinling University.

Inside a somewhat cluttered rental room, a short-statured girl sits in front of a computer, refreshing the webpage repeatedly.

This is a chemistry paper she wrote with significant effort, submitted to a Tier 2 journal, which is relatively challenging for Xiaogao.

Today is the last day for the regular response, and there will be a result no matter what.

If this paper passes, she will have an opportunity to graduate with perfect grades, smoothing her path in life significantly.

As she refreshed the webpage, some slight noises suddenly reached her ears.

She got up, walked to the window, glanced up a few times, and exclaimed in surprise:

"It's raining....."

She watched the rain for a while before remembering what she was doing.

She hurried back to her seat and suddenly noticed that at some point, an email had landed in her inbox.

The girl tremblingly clicked open the email.

A moment later, a joyous cheer burst forth in the room:

"Oh yeah, Accepted!"

Once again, the view shifts.

Rongcheng.

Screech——

After a sharp screech of brakes,

two sedans dangerously parallel at a 90-degree angle, halted less than half a meter apart at the front.

A tall, thin young man quickly got out of the sedan going straight, vigorously beating the other's car window:

"Did you drive with your eyes open? Didn't you see the red light?"

The window of the right-hinged sedan rolled down, revealing a middle-aged man:

"Sun Thief, who the hell are you cursing? Want to try saying that again?"

"% ¥ #%....."

"ζηθυωŠĐEOΨ..."

After a verbal altercation.

The tall, thin young man, seeing more and more onlookers, blushed and a malicious thought crossed his mind:

He had just returned from the supermarket, and in his car was a new kitchen knife bought to replace a dull one....

Drip——

As the young man's evil thoughts surged, a few raindrops suddenly fell from the sky.

Raindrops trickled down his head and slid into his collar.

With the rain falling.

For some reason, the young man's anger inexplicably dissipated, leaving no trace of fury.

Taking a deep breath, he pointed to the wife and daughter in the middle-aged man's car and said:

"Brother, aren't you afraid of endangering your family by driving like this?"

The middle-aged man was taken aback upon hearing this, then glanced at his daughter curled up in the back seat.

He remained silent for a moment, then stomped his foot hard, apologetically slapping his own face:

"I'm sorry, brother, my daughter's sick, and in my haste... hey, how about I compensate you 200 bucks..."

"Forget it, forget it, no harm done, just be careful next time. Smoke?"

"Thanks, thanks, I'll smoke mine..."

Soon after the middle-aged man and young man shook hands in reconciliation.

Further away, at Da Mao's Family.

The female director of foreign trade for the Rabbit clan, Pastoral Song, also reached out her hand to a foreign woman in front of her:

"Ms. Xiqin Kova, we have a pleasant cooperation."

Pastoral Song was sent to Da Mao's Family to negotiate a massive cross-national trade deal with significant implications.

Though the price offered met the rabbits' expectations, it was FOB, not CIF.

Pastoral Song negotiated repeatedly with the other side for several days, arguing her case both gently and firmly, but Da Mao wouldn't budge.

However, just as the rabbits were about to give up.

Da Mao's side suddenly agreed to Pastoral Song's request, promising to turn the FOB into CIF.

An hour later.

The agreement was signed.

Pastoral Song walked out of the meeting room, her phone rang just in time:

"Hello, this is Sugar, oh? It just rained at home?"

As the drizzle ceased.

Across the ocean.

In a majestic building.

An elderly man, looking somewhat dazed, was delivering a speech. However, as he spoke, he suddenly paused slightly.

A moment later.

As the room began to fill with an increasingly foul odor, another female legislator couldn't help but furrow her brows:

"Did it happen again..."

.....

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 276 276: 179 Zhang Really Carved Everything into the DNA Now (6.241K)**

[ 863 words ]

The outside world.

As this drizzle fell.

Many events that would have developed in another direction quietly reached a turning point.

These matters vary in size and importance.

Among them are national strategic plans, small businesses of ordinary families, and petty squabbles among common folk in the market.

This drizzle is like a broom.

It swept away the hostility and garbage in society completely, causing countless people's life trajectories to change silently.

And when these countless quantitative turning points accumulate, certain qualitative changes will naturally occur.

Of course.

This qualitative change cannot be seen by the naked eye, nor can it be touched, and it may take a very long time to truly see its effects.

From the rulers to the common folk, at most, they just feel that many things seem to go more smoothly than expected, nothing more.

Therefore, Xu Yun, who was in a closed space, naturally could not know these changes.

He could only speculate from the literal meaning, thinking it was likely a buff similar to a blessing, a common effect in games.

But he didn't quite understand what this +1 effect was.

Then he temporarily set aside his curiosity and focused back on the small balls.

He had already opened four small balls earlier.

He got a Time Album, a Formula Card with no explanation, a surprise egg, and a buff.

Although these rewards each had their own characteristics and weren't of low value.

They didn't seem to be real-life technologies like the Imidacloprid formula.

He wondered if there would be any other black technologies in the next four small balls?

Thinking of this.

Xu Yun couldn't help but stretch out his hand and poke the fifth bubble.

Pop~

A moment later.

A scrap of paper floated in front of Xu Yun again.

He instinctively grabbed the paper.

The texture of this scrap was very soft, only the size of a band-aid, and the content was very simple, just one landmark:

Longitude: 117.26132

Latitude: 31.83843

[Hint: This is a coordinate, guess what you'll find?]

Xu Yun immediately frowned.

Although his major is science, which doesn't intersect with geography, and he hasn't really come across longitude and latitude information in his spare time.

But as a Ke Da person through two lifetimes, he has some impression of these numbers:

Ignoring the last few digits, just looking at the first five digits, isn't this the Ke Da campus?

As for where the last few numbers are, it's hard to say, but certainly within the Ke Da campus.

Within the Ke Da campus... what could be there?

Surely not more cockroaches?

Besides...

If it were a girls' dormitory, what then?

With this slightly subtle feeling, Xu Yun stored the paper carefully and continued to open the sixth light ball.

Pop~

The moment he saw the transformation of the light ball, his brows instantly raised slightly:

The sixth light ball also turned into a small piece of paper, but this scrap seemed familiar to him:

At first, the paper containing the Fifth Generation Imidacloprid formula was of this material and specification.

Sure enough.

When the scrap fell into his palm.

Xu Yun spread it out in his hand, seeing a line of words written distinctly on it:

[DNA Storage Technology: This is a very interesting technology, but it also requires a little bit of effort for research, are you ready, young man?]

[Evaluation: Don't engrave everything into DNA, you scoundrel, except for Feng Hualian's rare videos before her retirement.]

"Wow, DNA Storage Technology?"

As a biologist, Xu Yun in this lifetime is relatively familiar with cutting-edge biological technology.

In the current advanced field of biology.

DNA storage technology has always been a project with low dissemination but is recognized as having great potential.

The theoretical basis of this technology is very simple:

Firstly.

The current computer data is stored using 0s and 1s, i.e., binary.

And students who didn't drive their biology teacher crazy should know.

Each position in DNA has only four possibilities:

AGCT.

If bases are assigned values, for example, A+T = 0, G+C = 1, then chemical signals could be converted into digital signals.

Hence, a DNA can be seen as a binary data storage material.

As for why to use DNA as a data storage material?

The reason is also simple.

The amount of information generated every day on Earth has already greatly exceeded the total of the past 5000 years of human civilization's evolution history (Source: International Data Corporation).

This is also the origin of the term big data era.

According to current trend estimates.

In just one year, 48ZB (1ZB =  $10^{12}$  GB) of data will be generated.

By 2040.

At least one million tons of silicon-based chips will be needed globally to store the data produced in that year.

So, someone has set their sights on DNA.

Technically speaking.

Besides binary effect, DNA can be artificially synthesized from the start using a solid-phase synthesizer.

Besides, DNA can be massively amplified in laboratories through PCR technology.

This ensures the convenience of synthesizing large amounts of DNA with desired sequences.

As for the advantages of using DNA for information storage...

Of course, they are high storage density, low energy consumption, long storage cycle, etc.

For instance, DNA storage density can reach  $10^{19}$  bit/cm<sup>3</sup>, meaning theoretically only one kilogram of DNA is needed to store the current global information total.

In 2012.

Church and others at the University of Pennsylvania used DNA synthesis technology to store a book, including 53,426 words, 11 pictures, and 1 JavaScript program, totaling 5.27MB.

Later, they stored an animated gif within DNA, which could be imported into Escherichia coli for self-replication.

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## **Chapter 277 277: 179 Zhang Really Carved Everything into the DNA Now (6.241K)\_2**

[ 818 words ]

By last year, which is 2021.

The local team at Southeast University successfully stored the school motto "Strive for Excellence" in four Chinese characters within a DNA sequence, and this even made it to SCIENCE ADVANCES. (DOI: 10.1126/sciadv.abk0100)

But on the other hand.

Although this technology has quite a promising future, it also has significant limitations.

The first issue is cost.

In general.

The cost of DNA bases AGCT is 0.5-1 US Dollar each, which is equivalent to 3-6 Huaxia Coins.

Because the "materials" are so expensive, it poses challenges for both experimental and civilian popularization.

The next issue is reading the data.

Currently, storing a movie takes several months on average, much longer than computer hardware cycles.

At present, the forefront team in this technology is led by Erlich at Yale University, and not long ago, they coded an operating system called Movie 1.

This system can not only run smoothly but even allows you to play Minesweeper.

In summary.

This is not a technology that appeared out of thin air; it possesses certain foundational products and possibilities, making acceptance relatively not so difficult.

However, it is foreseeable that.

Just like how there was the threshold of the fourth generation beyond the fifth generation of Imidacloprid formula.

The DNA storage technology provided by Halo probably still requires a lot of effort in research to potentially achieve results.

At the same time,

A feeling Xu Yun couldn't quite describe emerged in his heart.

He always felt this technology seemed to be prepared for something other.

But after thinking it over, he ultimately couldn't find out what it was related to, and temporarily pushed the thought to the back of his mind.

Perhaps it's just his wild imagination....

Anyway, regardless.

This DNA storage technology is also the only tangible technology he has obtained so far.

The previous equations and landmarks at most merely had the possibility of manifesting some technology, not guaranteed formulas.

Xu Yun then adjusted his breathing a bit and focused on the last two light spheres.

What would they reveal?

Soon enough.

Pop~

This time.

What appeared before Xu Yun was still a sheet exactly the same as the DNA storage technology.

Technology Reward Two Hits.JPG.

After obtaining the sheet.

Xu Yun skillfully flipped the sheet over, and upon seeing the information written on it, found himself slightly stunned:

"Well, what is this thing?"

On the sheet at the moment, the following words were prominently written:

[Artificial Intelligence - Beginner Edition - Upgradable]

[Review: An artificial idiot far dumber than Xiao Ai, but as long as you can become a marathon runner, you might see it upgrade one day!]

Xu Yun:

"..."

Honestly speaking.

After completing two tasks, he somewhat understood Halo's personality or had some preparations.

Thus, what made him silent wasn't Halo's cheeky comment, but the nature of this reward:

The technology reward coming up this time can be classified under physics, can be classified under computers, even mathematics.

But it hardly touches on biology.

Can this suggest a fact:

Halo's reward isn't limited to biological domain technology or knowledge?

If this is true...

The actual value and impact of Halo's potential will far exceed Xu Yun's original expectations.

After all, from a life research perspective, biology and chemistry surely are the key disciplines.

But from a technological perspective, physics and mathematics are truly core subjects.

If Halo's rewards include others, it's very interesting.

Keep in mind.

Old Su's task was only four-star.

Not to mention, there is a section about achieving a rating ratio.

If a high rating ratio is achieved in a five-star mission, what would be the reward?

Controlled nuclear fusion?

Anti-gravity technology?

Or an automatic typing keyboard?

Endless possibilities....

With such comparisons, the reward of artificial idiot itself seems less impressive.

After all, the beginner edition and the subsequent review explain it all.

To see it upgrade, more tasks probably need to be completed.

From the perspective of expressing capability, its ranking might be even behind DNA storage technology.

Of course.

Considering the formal name includes "Artificial Intelligence."

The value of this reward upon realization is evidently far beyond what DNA storage technology could compare; from the value perspective, it justifies its penultimate light sphere ranking.

And speaking of penultimate, one can't help but mention the ultimate one—currently, the only remaining light sphere.

Xu Yun then took a deep breath and put away the small sheet,

and looked at the eighth light sphere.

He didn't know if it was just his mentality.

He always felt this sphere seemed slightly larger than the other seven, similar to the difference between a chicken egg and a goose egg.

Then he paused for a moment and reached out towards this grand light sphere with his finger.

Splat—

The eighth light sphere emitted a distinctive shattering syllable.

Moments later.

A golden particle beam began to slowly drift out from the sphere.

This particle beam neither flew towards Halo like the Space-Time Album nor materialized into a sheet or Golden Egg like the other rewards, but.....

Slowly floated around in space, and finally, disappeared abruptly.

Xu Yun:

"????"

Could it be another buff similar to the Great Tripod?

But that isn't right.

The Great Tripod of national fate disappeared from space eventually, but at least it had a description before doing so.

Judging by this display...

Seems like it's combined the shortcomings of the national fate reward and Formula Card?

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## **Chapter 278 278: 179 Zhang Really Carved Everything into the DNA Now (6.241K)\_3**

[ 874 words ]

Scratching head.JPG.

Thinking of this.

Xu Yun couldn't help but let out a slight sigh:

Eight light spheres, all dismantled now.

The country's fortune, formula card, and golden particle beam are all unclear things, can't see their origin or destination.

Artificial intelligence is an entry-level fool, shouldn't have much hope in the short term.

As for the easter egg....

This thing might bring emotional surprises, but it won't have much practical value.

At the Ke Da coordinates, what can be discovered is still unknown, but the only rewards that truly make Xu Yun feel 'it's worth it' are actually two:

Space-Time Album and DNA storage technology, the former being the first reward dismantled.

This is a bit disappointing, does it match the hard work I've put in?

If this content were in the novel I wrote in my previous life, I'm afraid the readers would criticize me badly!

Thinking of this.

Xu Yun looked around again.

The rewards that should have been taken are already taken, the Space-Time Album's time is already used up, staying in the space has no meaning.

Therefore, he thought for a moment and decisively chose to return to reality.

Whoosh——

After a slight dizziness.

Xu Yun's eyes lit up and he returned to the long-lost small room, standing in front of the computer desk.

One press opened the phone, time automatically appeared.

Just like the 1665 dungeon.

The dungeon passed nearly a year, but only a few seconds ticked in reality.

He left wearing a down jacket with warm boots.

Returned in an ancient costume, even the hair had grown to the style of ancient people.

At the same time.

Xu Yun was surprised to find out one thing:

After a year in the Northern Song, he actually felt a subtle but clear disconnect with reality... that is, the modern technological environment of the 21st century.

For example, the phone on the desk.

When booting it up and checking the time, he pressed the volume button several times before realizing the small button below was the power button.

You have to know.

This is only the second dungeon he has experienced.

Who knows if the next mission might have a term of two years, three years, or even five years?

This disconnect brought by the switch between two eras indeed requires quite some time to readjust.

To describe it using an idiom...

As if separated by time.

Perhaps before entering the next dungeon, he could prepare a notebook on the table?

Flip through the notebook when returning, maybe it will help him recall reality faster and also avoid some psychological issues.

In his previous life when writing novels, he read a book called "Global Film Emperor", where the main character seemed to have such psychological issues.

Like transmigrating into an old man, returning and falling for an old lady or something...

Thinking of this, a line of poetry surfaced in Xu Yun's mind:

"Who awakens from the big dream first....."

However, just as he was still dazed, a voice suddenly sounded in his ear:

"Where is this place?"

"???????"

Upon hearing this sentence.

Xu Yun immediately got a shiver all over, instinctively turned around.

At this moment.

Not far from the foot of the bed, a young man about 20 years old stood!

A series of possibilities like a thief flashed through Xu Yun's mind, instinctively grabbing a fruit knife from the table.

Shoulders sank, assumed the starting stance of "Lai Fu Sword Technique", and shouted:

"Who are you?"

"Me?"

The young man raised an inexplicable expression on his face, stared at Xu Yun for a while with furrowed brows.

After confirming Xu Yun's expression was serious, he spoke in standard modern Mandarin:

"I am Su Song, what? Xiaowang, you don't recognize me?"

At the same time.

A light screen slowly appeared in front of Xu Yun:

[Special mission settlement reward: An 18-year-old Su Song, complete ID, in the prime of youth, possessing all memories of past lives, make sure to give a five-star rating!]

[Evaluation: The historical Su Song has an unremarkable reputation due to various reasons, instead of correcting people's perception, let him create history anew by himself!]

"Holy crap?!"

.....

Note:

Completed this chapter, feeling relieved.

It feels like asking for ratings two days ago was a bit premature, many readers said I got points deducted for making Old Su depressed, but Old Su's conclusion is here....

I actually hinted early on that Old Su would come to modern times, and hinted more than once, starting with Xu Yun's admiration when he deduced the principle of the generator, many similar hints came later.

And during the coup it was said, unless Old Su truly sees the original historical facts, he can't be relieved.

This is the foreshadowing I laid from the beginning, why does the protagonist traverse to Old Su at the Great Success Stage?

How much can a dying man change the world?

The answer is here.

No matter how dungeon history unfolds, Old Su knowing about native history is scarce, he certainly has to change it himself...

.....

For example, the phone on the desk.

When booting it up and checking the time, he pressed the volume button several times before realizing the small button below was the power button.

You have to know.

This is only the second dungeon he has experienced.

Who knows if the next mission might have a term of two years, three years, or even five years?

This disconnect brought by the switch between two eras indeed requires quite some time to readjust.

To describe it using an idiom...

As if separated by time.

Perhaps before entering the next dungeon, he could prepare a notebook on the table?

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## **Chapter 279 279: 179 Zhang Really Carved Everything into the DNA Now (6.241K)\_4**

[ 280 words ]

When I get back, flipping through the memo might help me recall reality faster, and also avoid some psychological issues.

In my past life, when I was writing a novel, I read a book called "Global Film Emperor," where the protagonist seems to have developed some psychological problems because of this.

For example, turning into an old man and then coming back to like older ladies...

Thinking of this, a line of poetry popped into Xu Yun's mind:

"Who wakes from a great dream first..."

However, just when he was still a bit dazed, a voice suddenly came to his ear:

"Where is this place?"

"??????"

He heard a sentence.

Xu Yun was instantly startled all over, and instinctively turned around.

At this very moment.

Standing right at the end of the bed not far from him was a young man around 20 years old!

A series of possibilities like a thief instantly flashed through Xu Yun's mind, and he instinctively picked up an apple knife from the table.

Lowering his shoulders, he assumed the starting position of the Lai Fu Sword Technique and shouted:

"Who are you?"

"Me?"

The young man raised a slightly baffled expression on his face, staring at Xu Yun with a furrowed brow for a while.

After confirming Xu Yun's expression was serious, he spoke in perfectly pronounced modern Chinese:

"I am Su Song, why, Xiaowang, don't you recognize me?"

Meanwhile.

A light screen slowly appeared in front of Xu Yun:

[Special mission settlement reward: a Su Song aged 18, with complete documentation, in his prime, possessing all the memories of his previous life, be sure to give a five-star rating!]

[Evaluation: Historically, Su Song's fame was not prominent for various reasons. Instead of correcting people's perceptions, why not let him make history again himself!]

"What the hell?!"

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## **Chapter 280 180 My Roommate Comes from 1,000 Years Ago (Protective Chapter, Do Not Subscribe)**

[ 825 words ]

Note:

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.Its head began gnawing furiously at the male cockroaches

.... Afterwards, the female cockroach lost its grasp of existence, consumed by an endless number of similar beings in a completely surrounded observation environment.

.The male cockroaches, however, had not yet begun to move, limited by certain initial conditions

.With exuberant and peculiar excitement, the male cockroaches gradually gathered around the solitary female cockroach from the American cockroach continent over the next twelve clock minutes

.In vast amounts, the signal chemicals began to diffuse, neural signal receptors and the olfactory sensing receptors started to react, with the bone marrow's chemical signal ring-detected problem having occurred

... That is the key

.With six leg movements in midair, its body suddenly flips over, and the large cockroach falls down, after a few dozen rearrangements

.Unexpected outcome

Accelerated speed

.Already twelve minutes past, the American cockroach finds itself unable to stand steadily even against the walls of the container, slipping over as it supports itself with one leg.

.Clearly excited, with maximal wing span open, spinning quickly as its antennae flickered, this cockroach clung tightly to the container's walls—an approximately four-centimeter long American cockroach

.Looking in the direction pointed by Yao Pei Zhou, Yun Xu hurried forward

"Quick, look at box number 2, the cockroach reacted!" exclaimed the professor excitedly.

:Remarked Yao Pei Zhou fervently from next to him, Yun Xu nodded, preparing to encourage Jade Pendant with a few words

". Box number 1 used food in four cycles, four cycles box number 2, cycle five box number 3, cycle two box number 4, and both box number 5 and box number 6, the correct setup was initiated at 62 minutes and 63 seconds"

"How long has it been?" Zhou Xiao

:Asked Yao Pei Zhou, looking toward Yun Xu

.In a few moments, the cockroaches in box number 6 gathered towards the bait adhesive

.However, the effects and ingredients of the chemical mixture are worlds apart

.Very apparent

.Only when the cockroach began to move towards opening its mouth did the bait adhesive in box number 4 contain Bai Shi extermination formula, this condition persisted for a full three cycles

.More cockroaches filled the space after those who had eaten the bait withdrew first, in the container of box number 2

.An exploratory cocroach edged forward, while the others in containers 6-4 remained stationary, at the same time

.Chemical signals from the pyriproxyfen aggregate began to waft, gradually attracting three to four lead cockroaches closer, quickly starting to gnaw the bait adhesive

.After several tens of seconds

.Yet after several tens of seconds, the commotion subsides and the cockroaches gradually return to normalcy within the container, micro-convulsions triggered when the small dish containing bait adhesive made contact with the container bottom

.Without anything to hinder it, the dragon-fly's look was clear with twitching wings and legs beneath the semi-transparent azure container, creeping incessantly along the wall and base of the container, energetically darting about

.A regular 20x30x45 chamber, equipped with a small water bowl, with initial observations by Yun Xu

.Performance monitoring begins as the camera footage is activated; Yun Xu and other colleagues use the container's descending and ascending devices

.Boxes 1-3 and creatures of pyriproxyfen bait are housed within containers 6-4, thirdarily

.Visually semi-transparent, the bait roughly the size of a grain of rice, resembles a kind of creamy ointment

.Additionally, other small dishes were topped with Kaida's exterminator, Lin Xiaohongni's Zhi Ling pest killer, and Ye Feng's 吡啉 insecticide

.A single droplet of pyriproxyfen was squeezed onto each of three small dishes, with Yun Xu wielding a dropper, promptly ready for the next sequence

.This being just a simpler version, though not markedly inferior, in Yun Xu's assignment-led estimation

.Though economically viable for spaces no larger than 30 square meters, larger areas exceeding 100 square meters just need a bolster of budgetary power to manage the elimination of cockroaches. Therefore, Bai Shi exterminator was not conventionally applied to broader regions

.In simple terms, though broad-spectrum cockroach eradication products like Tian Hua Zhi's prove superior in effect, they are not readily producible

.Returning surveillance to the experimental facility

.For boric acid's commercial context, relative reviews note the convenience of Tao Bao for purchase, where higher potency solutions exist

.Mainly prepared by mixing boric acid powder, that dehydrates and kills upon ingestion, sugar attracts cockroaches, blended into soil chunks

.The boric acid-soil pellet ratio allows for appropriate bean-sized clusters to be set lightly in various corners

.The same formulation was previously shared by renowned old master Xiaohu Liang, known for the soybeans+boric acid+sugar mud concoction

.Bai Shi's pyriproxyfen bait is currently the best civilian choice in the country, though costly, one rice-grain sized gel can sustain the elimination of 60 cockroaches over 2-5 generations

.Further aided by the dispersal allows behavioral tendencies for signal carrying, though pyriproxyfen naturally doesn't incorporate signals similar to lethal variations, its implementation is generally restricted to three generations or fewer

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## **Chapter 281 180 My Roommate Comes from 1,000 Years Ago (Protective Chapter, Do Not Subscribe)\_2**

[ 819 words ]

At times, you can occasionally see some dead cockroach bodies, either at the head or the tail, seemingly hollowed out. Cockroaches are happy to eat the excrement of living cockroaches alongside the dead ones.

Cockroaches do indeed gnaw on similar corpses.

Cockroaches with the same eating behavior.

...are just like that.

The true effect of imidacloprid lies in the second category, though this situation may only attract a few cockroaches in the end.

Many cockroaches are drawn to the bait gel due to its scent, which can be perceived within a range of two meters, a perception area fully equipped with sensory awareness.

Its propagative principle comprises two types.

The main mechanism operates by disrupting pest neurological functions through chemical signaling, with imidacloprid acting as a nicotine-acetylcholine receptor agonist used in biological poisons, targeting pest control from an ecological standpoint.

Yun Xu quickly sketched this picture, recollecting the operations of the platform.

....Oh dear.

....A pit so deep that a singular person cannot see the end, with billions of cockroaches crawling within, sinking into external nothingness upon being overwhelmed.

Suddenly, Yun Xu's mind flashed to a scene once imagined long ago: cockroaches filling the inside wall of a cultivation chamber.

A large pitch-black vessel, crammed with a hundred and fifty cockroaches. It was the first full-sized experimental test conducted by Yun Xu and others, pondering over the accidental nature of the experiment. The male cockroaches ferociously chewing the head of another.

...afterward, all signs of life disappeared, mirroring the overwhelmingly superior female American cockroach.

The male cockroaches showed no human-like movement initiation, a circumstance peculiar to a few earlier generations.

During a span of twelve minutes, the male cockroaches gradually gathered around the singular female American cockroach, seemingly excited, with vigorous sexual attraction.

Significant quantities of pheromones began to diffuse, neurological receptors on peripheral scent-sensing neurons reacted to the influx of chemical cues now deeply embedding in the white egg-like structure of pheromone rings.

...is even more critical.

A giant cockroach suddenly flipped over and futilely surged upward into thin air after numerous minutes.

Yet it seemed futile.

Nonetheless, its climbing speed was remarkable, revealing an evident neurological problem, although it quickly resumed position.

Towards the container's bottom, supporting one leg, it wobbled, failing to even stand against the container wall, as twelve minutes elapsed again.

Observably excited, it extended its wings as far as possible, rapidly tapping its antennae against the container wall. This American cockroach measuring approximately four centimeters was significant.

Yun Xu hurriedly moved forward, following the assistant pointing to eternity.

"Look at box 2 quickly, there's a reaction on this cockroach," urged the supervisor, Yun Xu nodded.

"63 seconds, 62 minutes in standard discharge mode for Box 1, used as iteration four for Round Five in Box 3, iteration four Box 2, Box 5 and Box 6 being single iterations."

"How long has the time elapsed?" questioned Zhou Xiao.

At seeing Yun Xu's expectation directed towards Yao Pei Zhou, Zhou asked.

Before long, cockroaches accumulated directly on the bait gel in Box 6, progressing a few minutes forward again.

The result was vastly different from mixing physical properties with chemistry, although it contained the same pheromonal components.

Absolutely clear.

Only when a cockroach in Box 4 started moving into the contained drill were they persistently continuous in Round Three.

Sequentially, a new set of recruits subsequently moved in, as early cockroaches retreating after consuming the bait gel, while in Container 2.

Another cockroach remained inactive within containers 6-4, staying static at the same time.

The pyrethroids mixed with imidacloprid soon began to emit a chemical combination, gradually attracting three to four head cockroaches towards the bait gel, quickly initiating feeding.

Then another mere dozen seconds passed.

These cockroaches, after several dozen seconds, promptly recovered normalcy, but they were initially set into a flurry, small quakes triggering as they bumped against the bottom container, within lies small bait gel dishes.

A remarkably lively cockroach incessantly running back and forth, displaying its wings faintly spread and hairy legs vividly visible, as it climbed up the inner walls and bottom of the container, seemingly without the hindrance of an enclosure, as noted from Kaka Luoluo.

The inspection commenced primarily with Container No. 2, noted for its grid spacing of 03x54x02, a regular linear configuration, with a small quantity of drinking water placed inside.

Monitoring effects began with Yun Xu and others raising cameras to record observations, placing small dishes inside the base of the container through the adjusting mechanism.

Containers 1-3 received imidacloprid bait gels, then numbers 4-6 to follow sequentially.

The bait gel comparable to translucent milk jellies, roughly the size of rice grains.

As part of the experiment, Yefeng's national output insecticide, Lin Xiaohongni's formulation of Ling insecticide, Baibai's applicator tool had three other small dishes.

Yun Xu prepared everything, squeezing a single drop of imidacloprid paste on each of three small dishes, taking a drip dispenser.

The sole goal of Yun Xu was not particularly exaggerated, as if it had been marked.

As Baibai generally couldn't be killed over an area larger than 100 square meters, its lethal capability can be effectively measured in small spaces of 30 square meters.

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## Chapter 282 180 My Roommate Comes from 1,000 Years Ago (Protective Chapter, Do Not Subscribe)\_3

[ 873 words ]

. Production is difficult, but some of its effects exceed conventional expectations; at the moment, it is considered a comprehensive cockroach exterminator like the Base's Banishing Worship formula.

. Return to the line of sight in the laboratory.

. You can see relevant comments and evaluations on the Base's Taobao page, and it's not wrong to say that this formula has consistent effects.

. Boric acid powder is primarily used, sugar is to attract cockroaches, and it causes cockroaches to die from dehydration, molded into small dough balls.

. Mix boric acid powder with sugar in a 1:1 ratio, forming a suitable amount into small dough balls, placed at various corners.

. Old Master Fox Sharer, locally known as Jade Pendant, once shared this formula: boric acid powder + sugar + dough.

. It is the best current domestic use formulated as bait gel based on Baishu Erban extermination; amazingly effective but expensive, a single rice-grain-sized drop can continuously kill up to 60 cockroaches over two to five generations.

. However, it is because cockroaches do not carry a signaling substance akin to the scent of death, thus limiting its efficacy; pyrethroid is not very effective when widely used across generations, surpassing the third generation, due to its assistance in spreading unique habits.

. Often, when walking in normal times, you occasionally see some cockroach heads or tails hollowed out; such remains left are of similar type, as live cockroaches prefer to feed on dead cockroach carcasses and feces.

. It's correct that cockroaches will consume similar carcasses.

. Cannibalistic cockroaches...

... are indeed the case.

. The true insecticidal effect of Borax lies in a secondary generation, but it can still attract a few cockroaches under certain conditions.

. Many cockroaches will run after nibbling the poison, as their chemical senses cover an area of a dozen meters; it attracts roaches through mixed physical bait gels.

. It utilizes two transmission principles.

. From the perspective of eradication, it primarily functions through neurological disruption by chemical signaling channel interference, acting as an insecticide that uses acetylcholinesterase inhibitors.

. Yun Xu busily drew this framework diagram, reflecting on operations adjustment.

...

... submerged without drowning, falling downward heavily, within the thousands, deep unseen pit filled with surviving cockroaches.

: Suddenly, a scene Yun Xu had once imagined popped into his mind, looking at the fully insect-occupied cultivation chamber wall.

. A large, pitch-black mass, densely packed with one hundred and fifty cockroaches; Yun Xu and others used six incubation chambers during the first experiment, accounting for accidental outcomes. The male cockroaches aggressively devoured each other starting at the head.

... then, the life traces were utterly lost, witnessing the countless common female Blattidae encompass the Americas.

. The males remained inactive; this was due to some particular initial conditions.

. With increasing excitement, gradually a large group of male cockroaches amassed around this single American Blattidae within about twelve minutes.

. There began a chaotic spread of significant signals, triggering receptor inputs across the olfactory neural membrane interface, deepening into the central cycle of chemical signaling within the bone marrow. The problem originated from neuromotor response.

... is the key.

. Without force, this single large insect abruptly flipped over, its six legs dancing in the air.

. A rather unexpected result.

. Already, there was an apparent neuromotor problem as observed from its rapid ascension, but though it flipped quickly, it remained prone.

. About twelve minutes later, the American Blattidae couldn't even stand against the incubation chamber well, struggling with a leg shift as it fell to the bottom of the container.

. The cockroach, at this time, was closely clinging to the chamber wall, quickly batting its delicate wings, responding rather uniquely, exhibiting extreme wing extension excitement; this was a four-centimeter-long large American Blattidae.

. Xu Yun quickly approached, directing his attention to the perennial assistant's indication.

"! Reaction in this cockroach! Look at compartment 2 quickly, Professor,"

: Suddenly said the excited long-term assistant nearby, while Yao Pei Zhou was about to offer a few encouraging words, Yun Xu simply nodded.

". Compartment 1's consumption is now at quaternary, compartment 2 at tertiary, two wheel system compartment 4, single wheel compartments 5 and 6,"

"? How much time has passed,"

: Asked Zhou Xiao, noticing Yun Xu's visible reaction towards Yao Pei Zhou.

. After a few more minutes, the cockroach in compartment 6 gathered properly around the bait gel.

. The chemical blend is distinctly different in effect, containing elements including synapse signals.

. Very evident.

. Cockroaches commenced contact only when the first was moved, and there had been consistent continuity observed with compartment 4 containing Baidewo formulations throughout three turns.

. Following a new batch replenishment, the initial few cockroaches retreated after consuming the bait gel within compartment 2.

. A particular testing cockroach took several steps forward, while those within compartments 4 through 6 remained unresponsive, synchronized in time.

. As the biped gel compound of pyrethrin generation four began fine diffusion, attracting three to four cockroaches gradually closer, initiating prompt nibbling.

. Several tens of seconds passed.

. Yet, after several tens of seconds, these cockroaches gradually recovered back to normal, despite a sudden moment of intense disorder within the compartment.

. Bouncing along the bottom and walls, you could clearly observe the American Blattidae including slightly exposed wing alignments and their antenna hairs, vividly afloat like a dragon taking flight on a wheels-free container, carelessly moving up and down.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 283 180 My Roommate Comes from 1,000 Years Ago (Protective Chapter, Do Not Subscribe)\_4**

[ 720 words ]

Dai poured some water into the trap after observing the bait setup, following Yun Xu's instructions, in a container with dimensions 20x30x45.

Afterwards, they activated the motion cameras to monitor the effectiveness, placing small dishes at the base of the container, following Yun Xu's setup instructions.

The container with Bait No. 3-1 had three personnel followed by Bait No. 6-4, each containing Dai's specially made insecticidal roach bait.

The bait was just slightly larger than a rice grain, translucent, held together with Lin Xiaohongni glue to appear seamless when inspected closely.

Alongside the bait dishes, they placed three separate dishes with products made by Ye Feng that killed foreign roaches effectively, and other famous insecticides made by Ming and Zhang.

Yun Xu prepared and squeezed a bit of Dai's special roach bait onto each of the three designated dishes, ensuring consistency.

Yun Xu's primary objective was clear, but its outcome hadn't been straightforward; it only appeared as such due to simplicity.

Using large quantities of environmental control substances as pest management, Xu believed large areas wouldn't feel affected, except the small 30 square meters.

While it's difficult to mass-produce, its effectiveness could be overwhelming; Greater Than's extensive roach-killing chemical has been fundamental.

They returned to the observation cell through a secure route.

Purchasing from Youlai TaoBao under basic items, one could inspect labels about boric acid compositions, noting its effectiveness.

The primary component is boric acid, attracting the roaches with sugar and clumping matter, leading to dehydration, ultimately causing death.

Each corner had bits placed, adjusted to volume, with a 1-to-1 ratio of sugar and boric acid powder formed into clusters.

This was a mystery method which originated from a former expert known as Lin, and hence passed around as shared knowledge among traps.

Roach-killing efficacy of Greater Than brand's bait stands top-ranked within the country, although priced high; a single tiny rice grain could sustainably kill roaches between generations 2.5 and 5.

Bait shared no signals of information, hence fewer noticeable instances leading to attraction, pointing toward a similar flaw in Bait's third variant.

Eating dead bodies and excreted matter reflects a condition observed while roaches walked along the routes, highlighting their cannibalistic tendency.

Roaches happily eating dead roach bodies is a fact universally acknowledged.

Cannibalistic behavior among roaches.

...

In the second category, however, its efficacy as a genuine roach killer is definitive, though attraction among roaches appears minimal at last.

Due to the roaches with chemical sensory coverage at least 200 meters, they often rushed away after sensing toxic odors, revealing one aspect of the bait's complexity.

Two primary transmission principles exist in its function.

Its essential operational principle is causing neurological failures while suggesting a pest's derangement through signaling disturbance, predominately using Greater Than's acetylcholine agent.

Yun Xu hurried, putting this canvas into motion yet recalling some operational maneuvers.

Oops...

...

A deep, unseen pit, witnessing thousands of living roaches being caught, albeit secluded since its commencement.

Suddenly, Yun Xu's center emerged, envisioning the scenes once contemplated and roach-filled cultivation setups within.

Spanning a vast black expanse, densely populated with 150 roaches altogether; Yun Xu primed for experimental procedures accounting for coincidences, observing cannibalistic feeding.

Roaches eagerly consume identical structures when eating.

Cannibalistic behavior among roaches.

...

Authentic results from the second-grade bait highlighted its hidden effectivity, albeit less attracting roaches.

Many roaches, due to their chemical sensory coverage, would flee once a whiff reached them—the complexity of bait lay within such interactions.

There's a dual principle functioning within.

A calculated objective from a biological extinction angle, rendering neurological disturbances through acetylcholine, leveraging Greater Than's biochemical vessel.

Mindfully, Yun Xu revisited operational memories, putting this tactical mechanism into play hastily.

Oops...

...

A deep, unseen pit, witnessing thousands of living roaches being caught, albeit secluded since its commencement.

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## **Chapter 284 181 Old Su's Goal and Artificial Idiocy (5.269K)**

[ 908 words ]

The apartment Xu Yun rented is in a rather remote community outside Ke Da, a secluded area with a serene environment.

Moreover, considering the context of Halo Space, he rented a two-bedroom apartment with a living room.

Thus, although Old Su's appearance is somewhat abrupt, it will still take a relatively long time to adapt to life in the 21st century.

But at least in terms of accommodation, it is very easily arranged.

Then, Xu Yun used the local shopping function on the online platform to find a furniture store and ordered a walnut bed.

The bed's dimensions are 1.8 meters, costing four hundred dollars, including delivery, to be delivered within an hour and a half.

While waiting for the wooden bed to be delivered,

Xu Yun began introducing Old Su to the various functionalities of the furniture.

He first walked over to the switch, pointing to the energy-saving lamp on the ceiling, and said:

"The lighting facility above us is called an electric lamp; this is the switch, connected to the circuit behind."

"Just press the switch, and you can control the electric lamp to turn on or off, like this."

Saying this, he pressed the switch with a click.

The bulb went out, and the brightness inside the room decreased significantly.

Then he pressed the top again, and the energy-saving lamp lit up once more.

"Truly a clever tool..."

Old Su looked at the bright energy-saving lamp, a trace of amazement flashing in his eyes:

"Electric lamps... These are much brighter than oil lamps."

After speaking, he walked over to the switch with interest, gingerly touching it with his hand:

"Xiaowang... oh no, Xiaoxu, is the circuitry behind this object based on the same principle as the generator you originally created?"

Xu Yun pondered for a moment and said:

"The nature of the current is the same in both, both are alternating current, not direct current."

"However, modern circuit principles are relatively more complex, as the level of industry differs."

Old Su nodded thoughtfully.

Back when Xu Yun was working on telescopes and engines in the Song Dynasty, he often mentioned the words 'industrial level' to Old Su.

At that time, Old Su was somewhat puzzled:

Despite gathering the talents and equipment of the entire Song Dynasty, why did it still not meet Xu Yun's requirements?

But now, having come to the future himself, and seeing these simple yet technologically rich devices, he suddenly understood Xu Yun's meaning.

It turns out that what Xu Yun meant by the low industrial level of Great Song was in comparison to nine hundred years later!

It's like returning to a remote village after being accustomed to skyscrapers, it's only natural to feel unsatisfied.

Unfortunately, during Old Su's time, Cao Xueqin hadn't been born yet, otherwise he would likely have shared feelings with Granny Liu.

Then he turned his head again, pointing at the phone in Xu Yun's hand and asked:

"Xiaoxu, what is this?"

"Oh, you mean this."

Xu Yun tossed his Huawei nova6 a bit and said:

"This is called a mobile phone, a very popular yet sophisticated instrument of our time. You might not be able to fully understand its principles, as it involves electronic components and even more profound knowledge."

"As for its main function... in ancient terms, it is like transmitting sound over a thousand miles."

"Transmitting sound over a thousand miles?"

Xu Yun nodded with a smile, feeling inexplicably delighted introducing modern devices to someone from the past:

"That's right, just like what you saw earlier, I can communicate in real-time with someone miles away using it."

"Do you see this search bar?"

"Just input what you want to find, and you can search for a whole lot of desired results."

"And this is WeChat... Penguin..."

"This is the camera... Stand still, I'll take your picture!"

Click—

A moment later.

Looking at the screen, the expression was stiff, yet the face was identical to when he was young. A trace of shock flashed across Old Su's eyes again.

"Truly a divine artifact..."

He then noted down the mentioned icons one by one, pointing at a column and asking:

"By the way, what is this called Madu?"

"...just a learning tool."

Xu Yun calmly hid the icon and said with a composed expression:

"I'll get you a mobile phone when there's a chance. However, you'll have to find time to get a SIM card with me."

"Oh, and a bank card— it's like the drafts used in Song Dynasty banks, allowing you to withdraw money..."

After that, he took Old Su to the bathroom, introducing the use of the showerhead and toilet while fully clothed.

A few minutes later.

The two returned to Xu Yun's bedroom, and Xu Yun said:

"In short, you can stay here for now, and I'll take you out in a couple of days."

"Anyway, your documents and procedures are all in order, so you can take planes and high-speed trains."

"I'll also take you to Five States Mountain someday, your tomb is built there, and you can offer some paper money to yourself."

"To be frank, the difference between the 21st century and the Northern Song isn't just what's inside this room, you have much to learn."

Old Su agreed with a nod again after hearing this.

This room's area is smaller than his bedroom in the Su Mansion, yet it's filled with astonishing and mouth-gaping magical technology, truly a new world entirely.

Not to mention anything else.

Take that toilet in the bathroom, for instance:

When he first saw the toilet, he thought it was a water well from later generations, and he could just scoop water with the cup from the side.

Who would have thought.

This thing that appears 'exceedingly luxurious' turns out to be a receptacle for unclean matters used in dressing?

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 285 181 Old Su's Goal and Artificial Idiocy (5.269K)\_2**

[ 791 words ]

This is something utterly unthinkable during the Northern Song Dynasty; even the Emperor's family couldn't afford such luxury. (Note: Emperor Zhenzong of Song used a chair for defecation, with a wooden bucket underneath.)

Thinking of this.

Old Su couldn't help but sigh slightly:

Just as Xu Yun said.

There's still so much I need to learn.

During our previous casual chat, Xu Yun actually briefly analyzed my situation:

The skill I currently master the most is undoubtedly literacy; I can easily recognize most Chinese characters and understand their meaning.

In professional aspects.

Although I haven't undergone modern education personally, not even seeing a cafeteria auntie.

Still, my knowledge of mathematics and science from the Northern Song period isn't particularly outdated, especially since Xu Yun has taught me for a year.

Thus judging comprehensively.

My current level is roughly high school for physics, while math, chemistry, and biology are about middle school level.

Adaptability is indefinite, but mastering 21st-century lifestyle habits should be doable within one to two months.

Also, according to Xu Yun's introduction.

College physics generally requires four years of study before "graduation," after which one can either seek employment or choose to attend graduate school.

To have the capability to assist Xu Yun with research and development, one must have at least 'second-year graduate level' proficiency.

Therefore, Old Su quietly set a goal for himself:

Strive to elevate math, chemistry, and biology to university level within a year, and physics to second-year graduate level.

Should... not be difficult, right?

After all, when it comes to learning, I've truly never feared anyone.

Another half hour passed.

The bed delivery vendor arrived.

A few people worked together to move the wooden bed into Old Su's room.

Once the vendor left.

Old Su proactively expressed his desire to sit inside the room for a while; Xu Yun then found the CCTV film 'Huaxia General History' on a tablet for Old Su to start watching from Episode 98.

After doing this.

Xu Yun watched Old Su enter the room; then he returned to the bedroom and took out...

A USB drive.

This USB had quietly appeared in his pocket when he returned, and by pinching its sides, a light screen would appear in front of him:

[Artificial Intelligence - Beginner Version - Upgradable:]

[Growth-type artificial idiot, just plug the USB drive into the port for automatic activation, foolproof one-click operation because it is indeed a fool!]

"..."

Seeing this prompt, Xu Yun couldn't help but gently rub his temples.

A few seconds later.

He exhaled heavily.

Oh well.

Although he didn't have much hope for this artificial intelligence, it didn't hurt to try since it was a task reward.

With this mindset, Xu Yun plugged the USB into the computer port.

This computer was a custom-built machine configured through a friend, costing over four thousand RMB with moderate performance.

It could run games like PUBG and LOL, but not high-configuration ones like Elden Ring; mostly, it was for watching videos or work.

At this moment, the computer screen showed the desktop homepage, with a background of Tifa similarly dressed.

With the USB plugged in, the screen quickly turned into a gray speckled pattern, as if a TV with no signal.

Seeing this.

Xu Yun simply glanced at the port to ensure the USB was secure and patiently waited.

Although Halo often came up with some provocative words, it was reliable in terms of rewarding realization; program chaos was impossible.

Sure enough.

Over ten seconds later.

The screen flashed again, and at its center appeared...

A cat head.

This cat head wasn't 3D nor color images; how to put it...

If you were born in the 90s, you'd probably seen wristwatch-like toys called electronic pets.

Also known as "pet eggs" or electronic chickens.

The appearance of this cat head was extremely similar to early electronic pets:

A grey-white screen, rough digital dots, it actually looked clearer without glasses.

Beneath the cat head was an input field; Xu Yun tried shaking the mouse.

Yep, responsive.

Then he moved the mouse to the input field and typed a combination of Chinese-Japanese greeting using the keyboard:

Can you hear me?

Moments later.

Cat head:

"( ̄ ̄ )...."

"...."

Xu Yun took a deep breath and continued typing:

"Hello?"



"Automatic growth?"

Seeing this prompt, a glimmer of consciousness flickered in Xu Yun's eyes.

Computers are complex in terms of functionality, but in nature, it probably relates to artificial intelligence in two ways:

One is electricity.

Two is information accessed online.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 286 181 Old Su's Goal and Artificial Idiocy (5.269K)\_3**

[ 370 words ]

Then Xu Yun thought for a moment, turned off the broadband and began to observe the status bar again.

The information displayed at the mouse tip is clearly visible.

With the network connection interrupted, the progress bar no longer shows any sign of movement.

Xu Yun observed like this for half a minute and reconnected to the network.

Soon, the progress bar started moving again.

Xu Yunjian said while pinching his chin with his left hand, talking to himself:

"So... this idiot needs to grow through obtaining information from the internet... or bytes, shall we say?"

That's quite interesting.

Assuming 365 days per year, it can be converted into 31,536,000 seconds.

And assuming Xu Yun doesn't disconnect from the internet for an entire year, this idiot can grow to a degree of...



Xu Yun took out another small slip from his pocket, and gazed towards the Ke Da campus:

"I should go check out this landmark, don't let me down..."

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## **Chapter 287 287: 182 Chapter Cai Cai Zi's Treasure in the Old Nest (7.4K)**

[ 835 words ]

After greeting Old Su, who was staying in the room next door.

Xu Yun slipped his phone into his pants pocket, locked his door, and left his residence.

Twenty minutes later.

East District of Ke Da.

"Longitude 117.2764... Latitude 31.8392....."

Xu Yun was using a GPS app, humming a tune, and slowly walking along the campus path.

As he walked, he looked around, seemingly searching for the precise location.

It must be said.

The technological level these days is indeed advanced, even free GPS apps can pinpoint locations to five or six decimal places.

But no matter how precise the software, there is always a range, and the area covered on the ground is still quite large.

"117.2754...117.2756... Found it, 117.2764!"

After locking onto the longitude line.

Xu Yun did not rush to confirm the latitude line but first scanned the surroundings.

He was currently in the eastern part of the East Campus of Ke Da, near the Water Auditorium.

To his right at two o'clock was Guo Moruo Square, which was the core battlefield for exterminating cockroaches back then, wiping out millions of them.

At seven o'clock behind him was Building 14 where Chang Licheng and others were:

Back then, it was the mistake of Chang Licheng and Ye Guohong that led to the first cockroach riot, followed by the extermination live stream.

In a sense.

That could also be considered the Source of All Evil.

Then Xu Yun looked up at the sky.

After confirming it wouldn't rain soon, he continued searching along the latitude line for his target.

"Archive..... Building 215.... 216....."

He continued moving forward, passing several notable buildings, as the app's latitude got closer to the target.

"31.8372..."

"31.8384..."

"31.8388..."

"31.8392..."

Fifteen minutes later.

Xu Yun stopped close to the southeast gate of the East Campus:

It was a small sports ground composed of basketball courts. Fifty meters east across the main road was the Earth and Space Science Frontier Research Center.

To the west was the East District Physical and Chemical Building.

At this moment.

Several boys were playing a half-court 3V3 inside the basketball court, with seven or eight substitutes sitting around, three of them wearing short sleeves.

You should know.

It's already the end of December, and those daring to wear short sleeves are warriors.

The basketball game was intense, but Xu Yun had no desire to watch it.

"That's strange..."

He stood by the court watching the center for a while but found nothing related to the word 'reward.'

The reward couldn't be a ball, could it?

Or a hoop?

Then Xu Yun pondered for a moment and looked around.

Maybe what was on the note was not a specific point, but an area?

To the right of the basketball court was the southeast gate road, and the crowd was neither large nor small, sparsely populated with about seven or eight steps between people.

The trees on both sides of the road had been pruned early for the winter, with their trunks wrapped in twine for warmth and frost protection, also to reduce pests.

Everything on the right was normal.

Xu Yun's brow furrowed tighter, and his gaze turned to the left.

Fifty meters to the left of the basketball court was the East District Physical and Chemical Building. The area between the two was even emptier than the southeast gate road, with a few staff cars parked coldly.

Besides that.

There were only a few construction workers seemingly working on the sewers, and nothing else.....

Wait?!

Seeing a worker just entering a manhole, a bolt of lightning flashed through Xu Yun's mind:

Right.

If the reward can't be found above ground, could it be underground?

Based on past behavior of Halo.

It may act mysteriously, surprise, or shock people unexpectedly, but it never makes mistakes.

Which means...

The reward is likely beneath the ground!

Just as Xu Yun was pondering, suddenly a voice called out in his ear:

"Hey, God Xu?"

God Xu.

Since spending a year in the Northern Song, this was the first time Xu Yun heard this title again.

He instinctively raised his head and looked in the direction of the voice:

The speaker was a girl in a white lab coat, not very tall, with a ponytail.

At this moment, the girl was standing by the sewer, on tiptoe, waving at him with a bright smile.

Xu Yun was momentarily taken aback, waved in return, and a name quickly surfaced in his mind:

Guo Yuting.

She was a sophomore biology student, quite diligent, never missing a scholarship.

Guo Yuting had once assisted Xu Yun during his second graduate year; she was a very hardworking girl.

Upon this unexpected encounter, Xu Yun temporarily set aside his thoughts.

He quickly walked over to Guo Yuting, nodded to the two other guys in white lab coats, and asked Guo Yuting:

"Xiaoguo, what are you guys....."

Guo Yuting immediately gave him a 'you must take the blame' look, spread her hands, and said:

"Well, because God Xu recently unleashed his power, singlehandedly exterminating all the cockroaches in the East District."

"Later, the school considered that cockroaches, although they store their eggs in oothecae, sometimes lay eggs at gathering spots. With the hatching during the toxic stimulation, quite a few eggs might have been left underground."

"So the school organized a professional extermination team, and simultaneously conducted a comprehensive inspection of the drainage system, killing two birds with one stone."

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 288 182: Treasures in Cai Cai Zi's Lair (7.4K)\_2**

[ 869 words ]

"And for us unlucky ones..."

Upon saying this, Guo Yuting couldn't help but sigh and pointed to the ground:

"Of course, we're here to collect soil samples."

"...."

Xu Yun's mouth twitched slightly, feeling as though the juniors before him had suddenly turned into debt collectors...

Actually, thinking about it, it made sense.

The extermination operation organized by Xu Yun earlier probably wasn't particularly high in actual cost, but all the sunk costs and risk costs weren't low at all.

So after creating big news,

Ke Da naturally took the opportunity to exploit his weakness, chasing him to his lair to root out any future problems.

To prevent future troubles and avoid ending up with all the effort in vain.

Similarly, since they needed to exterminate cockroach eggs, Ke Da naturally wouldn't miss the opportunity to collect samples.

After all, it's easy to talk about finding high-density wild cockroach survival soil, but it's actually quite troublesome to locate.

Especially with nests that have accumulated over several years or even decades, it may be disgusting, but its research value is indeed high.

It's like coffee beans.

Currently, known substances in a single coffee bean exceed 4,000 types at the ppm level, with over a thousand still unidentified; we just know they exist.

It's the same principle.

A fist-sized piece of cockroach nest soil conservatively could contain tens of thousands of special substances, maybe something remarkable could be discovered?

So from an academic perspective, this approach evidently has no problem.

But as it is,

it's tough for juniors like Guo Yuting who are in the biology department.

Seeing the resentful faces of the juniors, Xu Yun quickly put his hands together in apology:

"I'm sorry, I'm sorry. How about this: my project group is looking for help to compile some regular files this weekend."

"An hourly rate of 25, two full days on the weekend, eight hours each, with lunch included. Are you interested?"

Upon hearing this, the trio of Guo Yuting immediately brightened up:

"Really?"

Ke Da enrolls only 2000 students each year, many of whom come from low to middle-income families, with a monthly living allowance of only 800 to 1200.

Thus at Ke Da... or indeed most C9 universities, taking weekend part-time jobs is a common practice.

The hourly wage for part-time jobs in Lu Prefecture usually ranges from 8 to 12, with some better ones reaching 15.

Anything higher usually involves jobs like tutoring or mascot costumes, which are rare and hard to come by.

Getting 25 an hour for compiling files in a lab, even just for one weekend, puts 400 in pocket.

For Guo Yuting and her friends coming from ordinary families, this is undoubtedly a very substantial sum.

So they quickly discarded whatever playful bit of resentment they had and began sharing everything they knew with Xu Yun.

Of course.

Offering such a 'high salary' wasn't Xu Yun being generous with others' resources or squandering funds.

According to Ke Da requirements,

The hourly wage for compiling data in a regular BSL-3 laboratory starts at 25; it's just that this duty had previously been covered by Qiu Sheng.

After calming down the juniors, Xu Yun then asked:

"Xiaoguo, did you collect samples this morning?"

Guo Yuting nodded, pointing to a small sealed box beside her, and replied:

"We just came back from the pipe outlet at Kai Zhen South Road and collected four samples in total."

"The shallowest is 1.5 meters from the surface; the deepest is nearly ten meters, all large cockroach nests."

Xu Yun nodded slightly, then pointed to the shaft in front of him and asked:

"What about this one?"

"This one..."

Hearing this, Guo Yuting's expression turned a bit more serious:

"We just arrived here not long ago, and started dewatering and trenching only ten minutes ago. The foreman in charge of pipeline repair is currently inspecting the situation below."

"If there's no problem with the pipeline, we'll find a suitable node to collect soil samples, but..."

Xu Yun glanced at her and asked:

"But what?"

Guo Yuting gestured around and pointed to the southeast gate, saying:

"But unlike other nodes, this node is the biggest and also the oldest sewage discharge node at Ke Da."

"During the cockroach extermination, the number of cockroaches emerging from this area was the highest."

"So unsurprisingly, there should be a very large cockroach nest below, or perhaps the biggest cockroach gathering point in Ke Da."

"A nest?"

Xu Yun blinked, looking thoughtful.

Though in reality, it's been less than a month since the cockroach extermination.

For him, the actual time span has exceeded a year, and some details have become blurred.

However, with Guo Yuting's reminder, he did recall:

The main battlefield for cockroach extermination was set in Guo Moruo Square, and the largest group of cockroaches did seem to appear in this area.

Could it be that the reward given by Halo...

Is still related to the previous cockroaches?

Xu Yunjian pondered for a moment, then pointed to the basketball court not far away and said:

"Xiaoguo, does the pipeline from this shaft pass under the basketball court?"

Guo Yuting glanced toward the basketball court and shook her head, saying:

"I can't quite remember since I don't understand the construction plans; I just remember this is a node, with what seems like three..."

Before Guo Yuting could finish, a voice with a Northwestern accent came from beside them:

"There's a pipe below the basketball court, and it's a medium-sized sewage pipe."

Xu Yun and Guo Yuting turned their heads in unison to see a maintenance worker climbing up a ladder.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 289 182: The Treasure in Cai Cai Zi's Lair (7.4K)\_3**

[ 937 words ]

The words from above came from this person's mouth.

After the Sword Cultivator came up, Xu Yun took the initiative to hand him a cigarette— Xu Yun himself doesn't smoke, but he has a habit of carrying a pack just in case:

"Sir, is there anything unusual in that pipeline?"

"Tsk, Tsk, Yuxi, thanks man."

The maintenance worker took off his gloves, grabbed the cigarette, tucked it behind his ear, and then said:

"Unusual? Nothing unusual, just that one section of the pipeline smells much less than the other areas."

Xu Yun instantly became interested:

"Smells much less?"

The maintenance worker nodded and stretched out his calloused left hand, pointing to the manhole cover:

"The pipelines under the basketball court are 1800mm in size...that is 1.8 meters, and further ahead there are some 2400mm ones and a main external one that's 3000mm."

"There's one section...oh, about under the basketball court you mentioned, where the smell is a bit weaker than the surroundings. I figured it might be because there's less accumulated garbage."

Saying this, the maintenance worker laughed:

"After all, it's a sewage pipeline. With water flowing, the amount of garbage at each point is certainly different..."

The saying goes.

He speaks unintentionally, but the listener takes it to heart.

Xu Yun is not a student in urban planning or engineering design, if he had heard this on a normal day, he might just nod and accept it vaguely.

But today is different.

Xu Yun is very clear that there must be something unusual with that basketball court area:

Either the air above it is special, or there is something underground.

Given this premise.

The maintenance worker's words that the smell is fainter in that area couldn't help but make him think deeply.

Then Xu Yun thought for a moment, turned to Guo Yuting, and asked:

"By the way, Xiaoguo, how do you conduct soil sampling?"

Guo Yuting bent down, took a form out of a backpack on the ground, and handed it to Xu Yun:

"If there's sludge inside the pipeline, we would definitely scrape the sludge. If a significant cockroach congregation phenomenon is found near the pipeline—for example, when detecting a large amount of cockroach excrement, then you can fill out this form to report it, and then have the engineering team drill down quantitatively."

"Once it's reached a certain depth, then just go and sample the soil."

"The school's support is very strong this time, after all, such specimens are indeed rare."

Xu Yun nodded knowingly, understanding the procedure of Guo Yuting and her team.

Anyone who cares about cockroaches should know.

Cockroach excrement contains a type of ester called ezoria, which can be detected with special NAC test paper.

Moreover, the higher the concentration, the faster the reaction, and it is still quite simple to detect.

Therefore, the step that Guo Yuting and her team follow is to scrape off sludge if possible, if not, use test paper instead.

Once signs of significant cockroach activity are detected, then it's time for the digger to go doo-doo-doo,

The large sewage pipeline cannot be more than 0.7 meters from the ground, and the pipes within the university usually range from 1.5 to 5 meters deep.

The largest external main pipeline is around 3 to 7 meters deep, varying depending on the university.

This depth is not very deep, usually reachable by vehicle equipped with a drill; the key is the operator's technical skills.

Although this way, the cost will definitely be higher than with pure manual digging.

But as Guo Yuting said.

In a school like Ke Da that has eradicated 99.99% of cockroaches, leaving only the main nest unhandled, it's almost a rare spectacle not seen in decades.

In the face of potential returns, what does spending some excavation cost matter?

Therefore, from the school's perspective, Ke Da's support for soil sampling is still very strong.

Then Xu Yun thought for a moment, a bit of determination flashed across his mind, and he asked Guo Yuting:

"Xiaoguo, did you guys bring protective gear today?"

"Protective gear?"

Guo Yuting was slightly taken aback, then quickly replied:

"Yes, we did...why, God Xu, do you intend to..."

Xu Yun nodded heavily:

"I'm planning to go down and have a look first. If not, then use the drill—I always feel like there's something good down there."

Guo Yuting hesitated for a moment, turned to look at her two companions, and slowly said:

"Alright then..."

The maintenance worker has already checked the internal condition of the pipeline, and the pipeline is currently in a drainage state.

Unless Ke Da was formerly known as Hogwarts, and there's a chamber under the girls' bathroom with a Snake Monster that likes to wander along the sewer, Xu Yun shouldn't have any safety issues.

Also, with Xu Yun's current influence within Ke Da, mobilizing a drill first and reporting afterward is no problem at all.

Thus, Xu Yun quickly changed into a set of protective gear.

This set of hazmat suits is custom equipment by Ke Da, very durable, and of much higher quality than what is commonly available in the market.

The head area is covered by a gas mask, capable of filtering a considerable portion of harmful gases.

There's an oxygen cylinder on the back similar in size to an insecticide can—this item is mainly equipped as a backup for special situations and might never be used even a hundred times in practice.

A simple tool kit, with items like a wrench and screwdriver, is attached at the waist.

Once everything was ready.

With a headlamp on, Xu Yun went down the manhole alone.

Paris has a well-known sewer museum, with a tunnel-like interior that has an arch shape, leaving a lot of space even for adults walking in.

The sewage system of Ke Da is somewhat similar to the German-built sewer in Jiaoao, designed as an inverted V shape, and it's one of the few universities in China with a  $\Lambda$  sewer.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 290 182: The Treasure in Cai Cai Zi's Lair (7.4K)\_4**

[ 1,385 words ]

After all, Ke Da was relocated by airlift to the Luzhou City Center, so many supporting facilities are of the most top-notch specifications in Lu Prefecture.

Da da da——

At this moment, Xu Yun was slightly hunched, walking alone in this sewer tunnel.

The depth he was at was approximately five meters below the ground, where latitude and longitude software was still usable.

31.8381.....

31.8387.....

Five minutes later.

Xu Yun stopped in his tracks.

The place where he was located happened to be the exact center of longitude 117.2764 and latitude 31.8392.

Then he remembered what the maintenance worker had said, hesitated for a moment, and removed his gas mask.

Just as expected.

Although the pipes in this area were still filled with a damp, musty odor, at most, it was like the level of a street-side trash can.

Far from the smell that a sewage outlet should have.

Then he continued without the mask, walking a few steps back.

In a short distance of no more than five or six meters, the smell in the pipe suddenly became putrid.

Xu Yun returned to his original spot, composed himself, and chose to walk forward this time.

Again, in just under six meters, the stench intensified.

This was undoubtedly good news, indicating that the area was shrinking further, also implying that the "reward" was getting closer.

Then Xu Yun turned on his flashlight and began searching carefully.

Trash bags.....

Chunks of raw meat.....

Chicken bones.....

Xu Yun's gaze swept over each piece of debris.

A few seconds later.

He suddenly stopped, his eyes locked onto the inner wall on the right side of the pipe.

At this very moment.

On this inner wall, there was a clump of green moss the size of a computer screen.

Xu Yun stepped forward, gently lifting it with his hand.

The moss didn't move at all.

He had to step back, take a small shovel from his toolkit, and gently scrape off a small piece of moss.

Afterward, he tossed the moss lightly in his palm.

After pondering for a moment, he picked up a piece of rotten meat from the ground with his gloved hand.

This piece of meat had originally been stuck in a crevice, soaked in various sewage for a long time, and was thoroughly decayed.

Its appearance was as if it was enchanted, emitting a formidable odor.

For an ordinary person without preparation, it could likely cause vomiting on the spot.

Xu Yun then placed the piece of meat into the moss, wrapping the moss into a ball to wait.

Ten minutes later.

Xu Yun released his grip.

Taking the piece of meat out again, he carefully sniffed it.

After a moment.

His heart skipped a heavy beat, almost missing a pulse:

This piece of meat, originally with a strong stench, after being wrapped by the moss...

The smell dissipated by at least two orders of magnitude!

Which means...

This moss...

Has some kind of purifying effect!

Whether it's sterilization, deodorization, or something else.

This needs to be thoroughly studied.

.....

In fact.

What Xu Yun didn't know was.

This area he stood on was a place where, even at the cockroach Empire's peak, few cockroaches were willing to linger.

Even Cai Cai Zi was no exception.

Because the corrupt air had nowhere to hide here, invariably purified.

.....

Note:

Up all night till now, here's 7.4k.

It's the last day, please give me your monthly pass!!!!!!

Chunks of raw meat.....

Chicken bones.....

Xu Yun's gaze swept over each piece of debris.

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Whether it's sterilization, deodorization, or something else.

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.....

In fact.

Xu Yun didn't know.

The area where he was standing was a place that even during the most glorious times of the Cockroach Empire, few cockroaches were willing to stay.

Even Cai Cai Zi was no exception.

Because the foul air had no place here and would certainly be purified. Raw meat chunks...

Chicken bones...

Xu Yun's eyes swept over the remnants one by one.

A few seconds later.

He suddenly stopped, his gaze fixed on the inner wall to the right of the pipe.

At this moment.

On this part of the inner wall, there was shockingly a patch of green moss the size of a computer screen.

Xu Yun stepped forward and lightly lifted it with his hand.

The moss didn't move at all.

He had to retreat a step, take out a small shovel from his tool bag, and lightly scoop a small piece of the moss.

Then he weighed the moss in his palm.

After pondering for a while, he picked up a piece of rotten meat with his gloved hand from the ground.

This piece of rotten meat had been wedged in a crevice, soaked in various sewage for a long time, and had thoroughly decomposed.

Its appearance seemed enchanted, exuding a shockingly foul stench.

An unprepared ordinary person might vomit on the spot.

Xu Yun then placed the rotten meat into the moss, rolled the moss into a ball, and waited on the spot.

Ten minutes passed.

Xu Yun loosened his hand.

He took the rotten meat out again and carefully sniffed it near his nose.

Moments later.

His heart skipped a beat heavily, missing a beat:

This originally foul-smelling piece of meat, after being wrapped by the moss...

The odor had dissipated by at least two magnitudes!

That means...

This moss...

Possesses some purifying effect!

Whether it's antibacterial, deodorizing, or something else.

It requires a good investigation to figure it out.

.....

In fact.

Xu Yun didn't know.

The area where he was standing was a place that even during the most glorious times of the Cockroach Empire, few cockroaches were willing to stay.

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Because the foul air had no place here and would certainly be purified.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 291 183 Old Qiu, Your Illness Can Be Cured! (5.4K)**

[ 848 words ]

After collecting the moss samples and having a rough understanding of their magic.

Xu Yun immediately confirmed one thing:

This is the reward given by the system!

And judging by the sanitation condition of the surrounding area, its effect seems to be more than just purifying rotten meat.

No doubt about it.

This is a discovery of great value.

Or, to be precise, it should be classified as a preliminary discovery.

Because Xu Yun currently doesn't know its purification method, nor whether the effect is due to the moss plant itself or some microorganism living within it.

Then he carefully stored the moss in the sample box and returned along the original path, climbing back to the surface.

As soon as he surfaced, Guo Yuting and several others waiting there came forward and asked:

"God Xu, did you find anything down there?"

Xu Yun nodded, pondered for a moment, then said:

"There's a suspected unknown discovery, but the specifics can't be concluded yet."

"Well, Xiaoguo, have the workers put the well cover back on and proceed to the next sampling location, I'll explain to the school."

Guo Yuting nodded with a vague understanding:

"Oh, okay."

Then Xu Yun watched the maintenance workers put the well cover back on, ensured it was sealed, then said to Guo Yuting:

"Xiaoguo, remember to meet me on the fourth floor of the Medical Center on Friday, I'll arrange some work for you guys, I have things to do now, I'll leave first."

Without waiting for Guo Yuting to respond, he turned and quickly left the scene.

Currently, he knows nothing about the survivability time of the moss sample and other information, so he needs to return to the lab as soon as possible for testing.

The southeast gate is quite a distance from the Medical Center, one is in the Central District and the other is at the outer corner of the East District, the actual distance is nearly five kilometers.

Therefore Xu Yun had to jog for half an hour before arriving at the bottom of the Medical Center Building.

But during the run, he suddenly noticed something:

Could it be due to practicing the "Lai Fu Sword Technique" in the Northern Song, his physical fitness seems...

Has improved a little bit?

Xu Yun's physique is not considered fat or thin, but due to spending long time in labs and libraries, he has been in a sub-health state.

Running five kilometers is doable, but it was impossible to have such even breathing as now.

Could it be that the physical enhancement gained in the dungeon also feeds back to the real body?

This is quite interesting.

However, considering the urgent task at hand is to study the moss, Xu Yun could only temporarily suppress this curiosity.

He hurriedly entered the elevator and arrived at the laboratory.

When he reached outside the lab.

Qiu Sheng, Li Yi, Ren Yongcun, and Zhou Peiyao and others had already received his notice and were waiting outside the door.

"Old Qiu, Xiaoli, Xiaoren, Xiaozhou."

Xu Yun greeted them one by one, then raised the sample container in his hand and said:

"Time is tight, I won't say any compliments, please kindly help identify this sample."

Qiu Sheng and the others nodded together:

"Understood!"

Previously, when researching Fifth Generation Imidacloprid, Xu Yun specially created a seven-member WeChat chat group to facilitate communication among members.

Just while on the way.

He used the group's voice feature to briefly describe his discovery and asked everyone to quickly get to the lab.

That's why everyone was waiting outside the door now.

Although the project group had already exceeded the deadline and theoretically should be retracted.

But because Xu Yun's Fifth Generation Imidacloprid has a broad prospect, Ke Da generously lent this BSL-3 level lab to Xu Yun indefinitely.

As for the nature of BSL-3...

Involving some sensitive topics, this won't be elaborated further here.

In short, it's configured much higher than ordinary biopharmaceutical labs.

After entering the lab.

Everyone quickly took their positions and swiftly entered experimental mode.

Previously mentioned.

The source of the moss's purification ability has two possibilities:

One, moss is a newly undiscovered plant that can secrete purifying substances.

Two, the moss harbors or parasitizes some, or multiple unknown microorganisms.

Hence, the first thing Xuyun and the rest did was pinpoint the source of the moss's purification ability.

Fifteen minutes later.

Zhou Peiyao looked up from the electron microscope and said to Xu Yun:

"God Xu, I cross-referenced with FOC and the Huaxia Plant Atlas, the moss matches the common aquatic moss in appearance."

"Also, the ITS genes have been tested, showing no signs of mutation, confirming it's not a new species and has no inherent purification ability."

Xu Yun nodded calmly.

Zhou Peiyao's experimental result was clear, directly excluding the first possibility.

Thus, the cleaning effect should be attributed to some microorganism present in the moss.

This answer is not surprising.

Currently, on Earth, already discovered microorganisms—including bacteria, fungi, algae, etc.—total around two million.

As for the undiscovered quantities, they are far greater and fluctuate significantly.

As we all know.

Currently, there are two methods for estimating the number of biological species:

One is directly asking taxonomy experts to extrapolate theoretically how many species worldwide might yet be discovered.

The other method is to extrapolate the numbers of species in fully surveyed areas to estimate the global total.

However, these methods have many assumptions and limitations, making the estimated total species number vary widely.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 292 183 Old Qiu, your illness can be cured! (5.4K)\_2**

[ 878 words ]

The lowest estimated number is 3 million, with the highest reaching 1 billion.

Currently, a widely accepted number was proposed by Professor Camilo Mora from the University of Hawaii at Manoa:

8.7 million, excluding viruses.

This number was estimated using the application of biological classification hierarchies—essentially the trends in the number of kingdoms, phyla, classes, orders, families, genera, and species as learned in biology textbooks (org/content/113/21/5970).

For example, a phylum of animals = 10 classes = 100 orders = 1000 families = 10000 genera = 100000 species, with similar trends in the number of classification ranks among different groups, and higher classification levels being more stable compared to species.

Therefore, after a series of simulations, a more reliable total species number can be estimated.

Professor Camilo Mora's paper is currently one of the most cited statistical manuscripts worldwide and can be considered a relatively authoritative hypothesis.

8.7 million compared to 2 million.

Therefore, discovering the existence of one or even multiple microorganisms within moss did not surprise Xu Yun at all.

After a moment of contemplation, he said to Qiu Sheng:

"Old Qiu, let's start with the 16S similarity test first."

Qiu Sheng nodded, quickly put on gloves, and said:

"Alright, I'll do it immediately."

Generally speaking,

if the strain was cultivated in a petri dish, the difficulty of the test or comparison is often not high.

But if the target is a sample enriched from nature, the operation becomes more troublesome.

The 16S similarity test mentioned by Xu Yun refers to the detection of the RNA component of the ribosomal small subunit,

which is 16S rRNA.

This part has a length of about 1500 nt, slightly varying between different species. It is considered one of the mainstream procedures for detecting new organisms.

Five minutes later.

Qiu Sheng looked up and said to Xu Yun:

"Old Xu, it's ready. Which primer do you think we should use?"

Xu Yun thought for a moment and quickly said:

"1492R, I suppose."

"Got it!"

Half an hour later.

Qiu Sheng looked up and snapped his fingers:

"Done, it's amplified. You have the BLAST key, right?"

Xu Yun gave him a thumbs up to indicate a job well done, then walked over to the workstation and rapidly inputted a long string of keys.

Those who have done tests for new species should know.

The threshold for 16S similarity testing is somewhat vague because the threshold for similarity testing varies among different taxonomic groups.

For example, some have a threshold of 97%, others 99%.

Usually,

if the similarity is over 97%, it is considered the same species.

If the similarity is below 97%, it is considered a different species, and the next stage of testing is conducted.

However, this relatively imprecise testing method is still an obstacle for detecting many new organisms:

The majority of samples, after testing, will show a similarity of 99.99% with some other microorganism, indicating they are the same species.

In any case.

This technology is reliable for genus classification.

After a while.

Qiu Sheng looked up with a face full of surprise, his voice suddenly heightened:

"Old Xu, the similarity is 46.9%, 46.9%!!"

"Undoubtedly, this is a novel organism!"

Xu Yun seriously looked at him and confirmed:

"Only one new organism?"

"That's right, only one!"

Xu Yun nodded thoughtfully and then said:

"Then continue with the phospholipid fatty acid and respiratory quinone identification."

As is known.

New organism identification generally involves nine steps:

1. 16S similarity.

2. Morphological observation.

For instance, looking at the shape, size, and flagella of the bacteria, etc. It also includes determining the optimal growth conditions.

3. Phospholipid fatty acid identification, which has genus specificity.

4. Respiratory quinone, checking which predominant respiratory quinone it has, with species specificity.

5. Molecular hybridization, that is, determining the genomic sequence, a draft is sufficient, and then comparing it with closely related species.

Similarities over 70% are considered the same species, below 70% as different species.

6. Utilization of carbon sources, checking which carbon sources can be utilized, with a total of 95 carbon source tests.

7. API kit identification, an aspect of physiological and biochemical identification.

8. GC content.

9. Gram staining.

After these examinations, it can be determined whether it is a new species. (Note: I'm not sure if providing such detailed writing makes everyone willing to read it or not? This kind of detailed procedure is probably not covered in other writings, and asking around is actually troublesome. If it still seems verbose, I won't write it in such detail next time)

The fifth step, molecular hybridization, can be directly ignored this time—as the 46.9% difference detected in the first step is really too obvious.

Considering the time issue, Xu Yun distributed the steps one by one, assigning them to several team members to perform synchronously.

Five hours later.

A final report was produced.

"A completely new microorganism of the genus *Alternaria*, observable under a 1000x oil immersion microscope, featuring abundant pseudohyphae externally."

"This pseudohyphae can be isolated, binding with the target to complete some chemical reaction, is this... a bald attack?"

"Within a piece of moss, a high-density enrichment of 8000 units of the novel organism was found, having certain similarities with *Lactobacillus acidophilus* in characteristics... hmm?"

Afterward, looking at one section of the report, Xu Yun raised his head in puzzlement and asked Qiu Sheng:

"Old Qiu, is the new organism's effect on purifying food residues the most significant?"

Qiu Sheng nodded and pointed to a petri dish not far away:

"Our preliminary testing indicates that this novel microorganism can effectively inhibit the generation of ammonia, organic acids, and sulfides in residues."

"Moreover, it has a strong lethal effect on bacteria like *Neisseria* and Anaerobic *Streptococcus*."

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Tip: You can use left, right keyboard keys to browse between chapters.

## Chapter 293 183 Old Qiu, Your Illness Can Be Cured! (5.4K)\_3

[ 359 words ]

Xu Yun was slightly taken aback:

"Neisseria and Anaerobic Streptococcus?"

But soon, he came to his senses:

These two members of the Western Army are standard secretions of human saliva and gums:

You can find 80 million Neisseria in every milliliter of ordinary saliva, and as many as a billion Anaerobic Streptococcus in every gram of gum secretion.

It's quite normal for these bacteria to get into the drain pipes when you spit out bones, tomato skins, or half a maggot in the cafeteria.

Then Xu Yun pointed at the report and said to Qiu Sheng:

"Old Qiu, does the new strain only work on food residues and saliva bacteria?"

Qiu Sheng pondered for a moment and replied:

"Actually, the new strain also has some inhibitive effects on other odor sources, but it's far less effective than on food residues and saliva bacteria."

Xu Yun gave him a puzzled look and asked:

"What other odor sources are there?"

Qiu Sheng immediately started counting on his fingers:

"There's the little hamburgers in the toilet, and the piece of unwashed gym sock Xiaoli got from his roommate two weeks ago, and..."

"Stop, stop, hold on!"

Xu Yun suddenly had a black line on his forehead and hurriedly stopped Qiu Sheng's description.

Then he forced himself to calm down and continued:

"Alright, just report the data directly."

Qiu Sheng gave a mischievous smile and picked up another report from the table:

"Compared to other odor sources, the new strain's effect on food residues and saliva bacteria can only be described as miraculous."

"For instance, we gathered a new strain plant with a biological efficiency of only 8000 units, which is pitifully small."

"Yet it only takes about twenty minutes to completely purify a piece of food residue 0.3 cubic centimeters in size."

As he spoke, Qiu Sheng gestured with an 8 in front of Xu Yun:

"It's just 8000 units, you see, any one of the current penicillin units starts at the million mark."

"Old Xu, do you know what this means?"

Xu Yun was silent for a moment, and then his eyebrows rose:

"It means... your bad breath can be cured?" "Stop, stop, hold on!"

Xu Yun suddenly had a black line on his forehead and hurriedly stopped Qiu Sheng's description.

Then he forced himself to calm down and continued:

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 294 184: The Nemesis of Tone and the Bonds Through a Thousand Years...Right? (6.6K)**

[ 812 words ]

Qiu Sheng.

Height 186, weight 70 kilograms, thick hair, handsome as hell.

USTC biology PhD, scholarship awardee, nearly every boy's dream ultimate template.

But such a seemingly perfect person has an unspeakable hidden drawback:

He has halitosis.

According to Uptodate's statistics.

The prevalence of halitosis domestically is about 30%, meaning nearly 1 in every 3 people suffers from it.

In most cases, we have become accustomed to our own bad breath and therefore don't notice it much.

The causes of bad breath are actually quite simple, essentially stemming from two common factors:

20% attributed to *Helicobacter pylori*, 80% to microbial metabolism in the oral cavity.

The latter includes a large number of bacteria like *Neisseria* and Anaerobic *Streptococcus* as previously mentioned.

In fact.

The types and quantities of bacteria in the human oral cavity are numerous, with commonly known types amounting to about 500-600.

These include pathogenic bacteria, non-pathogenic bacteria, and opportunistic pathogens, among others.

Under normal circumstances.

In every gram of dental plaque from a healthy person, about 10 billion bacteria can be found.

These bacteria, along with saliva secretion, decompose food residues in teeth gaps into organic amines, ammonia, sulfides, etc.

After long-term accumulation, the smell is indeed quite something...

Of course.

There is also a rarer situation:

Where a person's rectum has an issue, causing excremental odors to reflux directly into the mouth.

This situation does exist, but it is classified as a complication of intestinal disease, not the regular concept of halitosis.

"Old Xu, 30% prevalence rate of halitosis!"

In the laboratory.

Qiu Sheng leaned forward with both hands on the table, expression excited and even a bit ferocious:

"Imagine how many people there are nationwide... no, worldwide? If this new microbial species can be used clinically, your company can walk on two legs!"

As a halitosis patient, Qiu Sheng has tried many kinds of treatment methods available on the market.

But whether it's teeth cleaning, mouthwash, or toothpaste costing dozens or even up to a hundred bucks a tube, the effects have been less than ideal.

Not that these are completely ineffective, the key is that their duration is simply too short.

Take Listerine mouthwash for example.

This is perhaps one of the more representative brands in oral disinfection, and objectively speaking, the mouth feels decent after rinsing.

But over time, that familiar odor reappears in the mouth.

So when seeing the experiment report, Qiu Sheng realized the value of this strain:

Like Ci Insect Forest, the discovery of this strain may not win high-level awards.

But it holds unimaginable commercial value!

Compared to Qiu Sheng's excitement, Xu Yun's mood was much calmer, given his experiences from a past life:

"Calm down first, Old Qiu, we're not even halfway there yet."

"You also do scientific research, you should know how difficult it is to go from the lab to a public product."

"Not to mention the challenges in cultivating the strain, then there's the issue of product direction—whether it's toothpaste, medicine, or mouthwash?"

"Different directions mean different positioning and varying difficulties."

"So it's something that requires careful planning, as the saying goes, you can't rush things."

Listening to Xu Yun, Qiu Sheng gradually calmed down.

In fact.

He usually isn't the type to get easily agitated; researchers generally have steady temperaments.

Nevertheless, being a part of the new microbial species' potential audience, he has been plagued by bad breath for far too long, leading to his temporary loss of composure.

After a silent moment, he asked Xu Yun:

"Old Xu, what do you plan to do?"

Xu Yun lifted his gaze slightly, placed his campus card on the table, and pointed to the USTC on it:

"Of course, call in reinforcements!"

.....

Half an hour later.

Life Science Building.

Dean's office.

"What? A new type of microorganism?"

Looking at the earnest faces of Xu Yun and Qiu Sheng, Tian Zhigang puzzledly adjusted his black-framed glasses:

"If it's a new eukaryotic species, just submit it to 'Fungal Diversity', why come to me?"

Friends from the past life familiar with microbiology should know.

In the biology community, there are certain protocols for submitting papers on new microbial species.

For instance, papers on bacteria should go to 'IJSEM', short for 'International Journal of Systematic and Evolutionary Microbiology', not to other journals.

Eukaryotic new species go to 'Fungal Diversity', an international journal hosted by the Chinese Academy of Sciences' Kunming Institute of Botany.

It's ranked second among global mycology journals and third among all 188 SCI journals hosted by domestic related academic institutions.

Of course.

If the microorganism is of exceptional value, it could make an appearance in 'PNAS', but such cases are rare and seen only every few years.

USTC and the Kunming Institute are under the Chinese Academy of Sciences, so Xu Yun can directly contact them for submission.

At least in terms of the procedure, there's no need for such a high-profile visit to Tian Zhigang's office for notification.

Seeing Tian Zhigang's puzzled face, Xu Yun couldn't help but turn to look at Qiu Sheng.

Then, he pulled out a report from his body and handed it to Tian Zhigang:

"Professor, please take a look at this first."

Tian Zhigang said nothing, took the report, and started reading:

"New species in the genus *Schizosaccharomyces*... Width 1.5 $\mu$ m... Oval-shaped...."

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## **- Chapter 295 184: The Nemesis of Tone and the Bonds Through a Thousand Years...Right? (6.6K)\_2 -**

### **Chapter 295 184: The Nemesis of Tone and the Bonds Through a Thousand Years...Right? (6.6K)\_2**

[ 841 words ]

The earlier part of the report mainly consists of graphical data of the new species, which purely seems like a new type of fungus.

However, as the line of sight moved downward.

His eyes suddenly became sharp.

A few minutes later.

Tian Zhigang solemnly raised his head and said to Xu Yun:

"Xiaoxu, is this data accurate?"

Xu Yun nodded heavily and confirmed:

"Absolutely accurate. Before coming, we re-collected multiple saliva samples and conducted several groups of control experiments."

"Finally, we found that the disinfection effect of the new microbial species is extremely amazing and stable, especially in the saliva sample of one of my friends, where the efficiency is even faster than other ordinary samples."

Qiu Sheng:

"..."

Tian Zhigang glanced again at the report, remained silent for a moment, and said:

"If the new species is really as the report says, then its commercial value will be astonishingly high... Xiaoxu, what are your thoughts?"

Xu Yun picked up the teacup to moisten his throat and pointed to Qiu Sheng:

"Old Qiu and I briefly discussed a few words on the way here and finally came up with a direction."

Tian Zhigang adjusted his posture, showing interest:

"Oh? Which direction? Mouthwash or spray?"

"No, it's toothpaste."

"Toothpaste?"

Tian Zhigang was taken aback at the words, but quickly responded:

"Something similar to a lysozyme toothpaste product?"

Xu Yun nodded and said:

"That's right, somewhat similar to lysozyme toothpaste, but it's currently just an idea. Specific operations require further experiments."

Toothpaste.

This was the prototype product that Xu Yun and Qiu Sheng came up with through discussion.

The concept of biological toothpaste dates back to 20 years ago, but the development in this field has not been rapid.

As of 2022, the most common biological toothpaste on the market is just one:

Plant lysozyme toothpaste.

Plant lysozyme can hydrolyze bacterial cell walls and dissolve various oral bacteria, and currently, plant lysozyme on the market is mainly extracted from figs.

However, like the mentioned mouthwash above.

Although lysozyme toothpaste has a good disinfection effect in the laboratory, the duration in practical applications is also limited.

To put it bluntly, it's a bit better than enzyme toothpaste, which is a so-called intelligence tax, but it still doesn't live up to its price.

So it can be said like this.

In the field of toothpaste, there is currently no truly effective biological toothpaste.

This is a huge and vacant market.

At the same time, compared to Ci Insect Forest, the only barrier in the preparation phase of biological toothpaste is:

Inactivation.

The so-called inactivation refers to a technology that retains the original structure and characteristics of beneficial bacteria but does not have the ability to grow and reproduce.

For example, all the probiotic yogurt people drink utilizes inactivated bacteria technology.

Imagine:

If there was a toothpaste on the market that could be used for three months, which not only cleans the mouth but also implants beneficial bacteria in the oral cavity that would kill various pathogens, decompose food residues between teeth, and produce calorie-free metabolic products,

Moreover, the taste of these metabolic products is particularly pleasant. People could choose their preferred flavors, whether mint, lemon, and so on...

In this way, the prospects of this product can be summed up in three words:

Who can compare?

Of course.

This is just a foresight idea.

To turn the new species into a finished product, besides the barriers in the preparation phase, there are also many technical difficulties:

For instance, the unit density mentioned before.

Not to say it has to be a million like penicillin, but it should be at least 500,000 units.

Moreover, ensuring the efficacy of the bacterial community is also a subject worthy of research:

It's certainly fine to have people with bad breath brush twice a day, maybe they can also manage three times.

But if it's necessary to brush five or six times, seven or eight times, or even more?

Then this toothpaste would lose its practical value.

Upon reaching this point.

Tian Zhigang couldn't help but look at Xu Yun and asked:

"Tell me, Xiaoxu, how should the institute... or the academy cooperate with you?"

Xu Yun slightly clenched his hand under the table, but still maintained a calm surface:

"First is the collection of samples. We found that this microbe emits green fluorescence when exposed to a 365nm wavelength, so I hope for comprehensive collection of strains in the campus's underground pipeline."

Upon hearing this, Tian Zhigang nodded:

"No problem, I can directly apply to the school board for this, adding just laser detection in the hardware testing process, it's not difficult."

Actually.

From the reward given by Halo, it's not hard to see that this kind of new species probably only exists in the underground drains of the basketball court.

But Tian Zhigang and the others don't know about this news. To an outsider, a carpet search seems normal.

That's why Xu Yun proposed this idea, trying to make his discovery seem more accidental.

Then Tian Zhigang paused and continued:

"Apart from comprehensive testing, what else?"

"Also support in terms of equipment and funding."

Xu Yun leaned forward slightly, naturally proposing a monetary request:

"Theoretically, the new microbial species holds high commercial value, perfectly fitting within Huadun Biotech's business scope, so shouldn't the school here....."

Tian Zhigang glanced at Xu Yun and said:

"That's not right, isn't there still a large sum of money in the company's account?"

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## **Chapter 296 184: The Nemesis of Tone and the Bonds Through a Thousand Years...Right? (6.6K)\_3**

[ 921 words ]

During the previous financing process, Ke Da Innovation Fund, acting as the leading party, invested a total of 8 million Huaxia Coins in cash flow.

Keda Physics College and Keda Life Science College each invested 2 million, totaling 4 million.

Xu Yun, through signing Ke Da's entrepreneurial support, injected a hundred in cash.

After deducting the factory rent of 1,314,222 coins, the company still has slightly over ten million on the books.

Faced with his teacher's questioning, Xu Yun scratched his head and said frankly:

"I'm just trying to save some money. Our company's future expenses are not small, after all, that money is all reserve funds."

"Not to mention logistics, product costs, and production equipment alone are no small figures."

"Once the company gets on track, we will definitely set up laboratories or even research centers and gradually build our own R&D system."

"But now we haven't even sold a single cockroach bait, I'm as poor as an online writer, you see....."

"Get out, stop joking around, you."

Tian Zhigang waved his hand at him, then pondered for a moment and said:

"Here's the deal, the academy just acquired a few Micro-Matrix 36-well mini bioreactors not long ago, the boxes haven't even been opened, and there's also a 350RPM orbital shaker. I'll send someone to deliver it to your lab later."

"Goodness, Micro-Matrix?"

Xu Yun lifted his eyelids and looked at his teacher in surprise:

"And a 350RPM orbital shaker? Teacher, since when have you become so generous? There's gotta be a catch, isn't there?"

Faced with Xu Yun's suspicious gaze, Tian Zhigang's eyes dodged slightly, tactically sipping water:

"Don't overthink it, there's no catch. I just want you to try out a new micromanipulation interface nanoliter injection technology and a high polymer feed method."

"This is a new project completed by Professor Huang Qian's team last week, and they just happen to need... cough, a practical report from the lab. So I thought of you."

"To quote an old friend of mine who's a top blasting specialist from the Engineering Institute, Ren Danzha: It's free anyway, why not try a bit?"

Xu Yun's mouth twitched slightly at the words, then he let out a faint sigh:

"Alright then, I'll do it your way."

Doing practical research for someone else is no easy task; you have to collect data on which steps succeed, which fail, and why.

For the two techniques mentioned by Tian Zhigang, even just practicing them with equipment wear and tear costs at least 150,000 to 200,000.

Seeing Xu Yun agree to his request, Tian Zhigang finally nodded in satisfaction.

Then he remembered something and took a fax from the drawer:

"By the way, there has been a reply to Dean Hou's internal patent push yesterday. The patent has been formally approved with the number 20221..."

"However, given that the paper hasn't been published yet, the patent number hasn't been publicized."

"I did some digging for you about the paper, it should be published within one to two weeks, considering it's a commissioned article, just wait a few days..."

"Oh, and Dean Hou also asked me to tell you, young man, you're very promising. Keep up the good work, and feel free to reach out if you encounter any issues."

"Dean Hou..."

Xu Yun glanced at the fax, keeping Hou Xingyuan's favor in mind.

At the moment, he might not have the ability to help Hou Xingyuan, as the latter is one of the top figures in the research pyramid of the Republic.

They stand tall in the clouds, and Xu Yun can only look up for now.

But with the completion of the Halo mission, he believes one day he will be able to return the favor to Hou Xingyuan.

Perhaps even further, to give a helping hand to the country.

This is not a mere dream.

It was mentioned earlier.

Prior to the Dungeon mission, Xu Yun's Sheryl was about to graduate with a PhD, with abilities roughly at the associate senior level.

His goal at that time was to replicate the footsteps of Nankai University's president, academician Cao Xuetao, and achieve the title of full professor by the age of 28.

But with the earlier use of the Little Bull Experience Card, Xu Yun's understanding of biology broke into a whole new realm.

His capability is now almost at the level of a full professor in a popular field, only lacking the stage of title selection.

If he can receive more rewards like the Thought Card in the future, Xu Yun firmly believes it won't be long before he reaches the pinnacle of the pyramid.

....

He then chatted with Tian Zhigang on other topics, learning about the latest campus trends and arrangements.

An hour later.

Tian Zhigang received a fax from the school board:

They have agreed to initiate a campus underground pipeline scan to try to locate new species of microorganisms.

The area around the basketball court will be under Xu Yun's responsibility, assisted by Ke Da's direct forces—the school's security team that once entered Building 14 with him to collect cockroach corpses.

Ten minutes later.

Xu Yun and Qiu Sheng said goodbye to Tian Zhigang and left the office.

Just as the two walked out of the medical building, Qiu Sheng suddenly made a sound of surprise and pointed in a direction:

"Old Xu, look over there."

Xu Yun looked in the direction he pointed.

At the moment.

A crowd was gathered under a distant tree, apparently watching something, and some were taking photos with their phones.

Being curious is a natural instinct in everyone, even PhD students are no exception. Xu Yun immediately patted Qiu Sheng's shoulder:

"Let's go take a look!"

In less than two minutes, they reached the edge of the crowd.

Just as they approached the crowd, a jumble of chatter reached their ears:

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## **Chapter 297 184: The Nemesis of Tone and the Bonds Through a Thousand Years...Right? (6.6K)\_4**

[ 781 words ]

"How strange, how come there are wild animals running in these days?"

"It can't be wild, our school is in the city center."

"What's wrong with the city center, did you forget the wild boar from two years ago?"

"The wild boar incident is not the same concept, that happened during the national lockdown when it wandered down from the mountain..."

"This one probably escaped from some restaurant..."

Wild animals?

Upon hearing this, Xu Yun's eyes flashed with curiosity.

Could it be a snake or a goat?

After all, if I remember rightly, there's a hotspot for snake meat near the West District.

Just as this thought crossed his mind, a boy in front of Xu Yun stepped aside, allowing him to squeeze into the front row.

At this very moment,

standing at the center of the crowd were several security personnel, working together to restrain...

a donkey.

Looking at the black donkey, Xu Yun couldn't help but have a peculiar thought:

Why does this donkey seem so familiar...

Just as he was puzzling over this,

the donkey being pinned to the ground suddenly caught sight of Xu Yun's face. It jerked with surprise, and its four hooves began to flutter rapidly:

"Eeee—awww—Eeee—awww—"

...

Note:

Someone actually guessed this Easter egg, amazing!

By the way, if I started a live stream while writing, would anyone watch? No face reveal but we can chat...

"How about this, the institute recently got a few Micro-Matrix 36-well mini bioreactors, the boxes are still unpacked, and there's also a 350RPM orbital shaking table. I'll have someone deliver them to your lab later."

"Oh wow, Micro-Matrix?"

Xu Yun raised his eyebrow, glancing at his teacher in surprise:

"And a 350RPM orbital shaker? Teacher, when did you become so generous? Don't tell me there's some kind of conspiracy?"

Facing Xu Yun's suspicious gaze, Tian Zhigang's eyes flickered slightly, as he took a tactical sip of water:

"Don't overthink it, there's no conspiracy or anything. I just want you all to try a new microfluidic interface nano-injection technology and high polymer feed method."

"It's a new project that Professor Huang Qian's group at the institute completed just last week, and we're just short of... ahem, the lab's practical report, that's why I thought of you."

"Quoting my old friend who works in demolition, elite demolition expert Ren Danzha from the Academy of Engineering, it's free anyway, so why not try a bit."

Xu Yun's mouth twitched slightly as he listened, finally letting out a soft sigh:

"Alright, let's do as you say."

Taking on practical research for others isn't an easy task, you need to collect and compile data on which steps succeed or fail, and the failure scenarios.

For the two technologies Tian Zhigang mentioned, practicing them alone, including equipment depreciation, would cost at least 150,000 to 200,000.

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## **Chapter 298 185: The Placement Issue of Brother Lv (Thanks to Boss Chake Xing for the Alliance Leader reward!!!)**

[ 826 words ]

"Xiaoxu, what did you say?"

Life Science Building.

Dean's office.

Looking at Xu Yun who had returned, Tian Liangwei was a bit puzzled and rubbed his eyes:

"You locked eyes with a donkey?"

"Not exactly locked eyes..."

Xu Yun glanced at his teacher, feeling a bit embarrassed despite having lived two lives:

"You might not believe this, but back in high school, I knew this donkey. It's been grinding at my hometown's village for many years..."

At the same time.

Xu Yun only wanted to say one thing to the halo:

What the hell, unbelievable!

He never thought that the Easter egg in this reward would turn out to be Brother Lv!

This is just incredibly inexplicable...

Of course.

Compared to Old Su's body restructuring, Brother Lv's 'crossing difficulty' is obviously much lower:

Just find a corner without people or cameras to spawn it.

After all, Easter eggs aren't supposed to be as complex as regular rewards.

As for rescuing Brother Lv, it was quite simple:

During the prior cockroach extermination, Xu Yun had become quite familiar with the campus security personnel, able to call them brother or uncle by name.

So after meeting Brother Lv.

He proactively explained the situation and finally temporarily tied Brother Lv to a tree near the side door of the Life Science Building with a rope.

Xu Yun then brought Qiu Sheng back to Tian Liangwei's office to seek help from his teacher.

"A donkey..."

Tian Liangwei frowned, tapping on the table with his forefinger, and said:

"Xiaoxu, you know, our Ke Da is perceived as a tech school by arts and science standards."

"Across all faculties, besides the Meng City Earth Geophysics National Field Science Observatory Research Station, only our School of Life Sciences is even slightly associated with animals."

"But most animals we deal with are for live dissection; we've never had any hoofed livestock experience before...."

After a while, he slowly raised his head and said:

"How about we turn this donkey into donkey meat sandwiches?"

Before Xu Yun could respond, he started calculating on his fingers:

"I remember a pound of donkey meat can make about 15 to 17 sandwiches, and the lean meat yield of a donkey is about half, at least 40%."

"Counting this donkey could provide 120 pounds of meat, that's enough to make nearly two thousand sandwiches."

"That's more than enough to distribute among our faculty, might even spare some for Xiaopan...."

As it turns out.

The urge to eat meat is buried in the blood of every Huaxia person, even for academician bigwigs there's no exception.

When Xu Yunjian spoke, the corner of his mouth twitched a bit:

"Teacher, isn't this approach a bit inappropriate?"

Tian Liangwei pondered for a moment, seemed to think Xu Yun made a good point, then nodded:

"Perhaps you're right, making sandwiches is too common, how about we change it, say, braised donkey meat?"

Xu Yun: "...?"

He then sighed softly and said:

"Teacher, seriously, does the faculty have a way to settle this donkey?"

Brother Lv worked so hard to make it to the present, putting him in a pot seemed a bit unjust.

If Ke Da has no solution.

Xu Yun would have to send it back to his hometown, to work as a laborer in the village where his grandpa lives.

Seeing his dear student genuinely cared about this donkey, Tian Liangwei didn't joke any longer.

After thinking for a moment, he suddenly came up with an idea and said to Xu Yun:

"Xiaoxu, you mentioned before... this donkey is good at grinding?"

Xu Yun nodded, having mentioned it briefly before:

"That's right, it grinds with great strength, capable of grinding for twenty... eleven or twelve hours a day."

A flash of inspiration appeared in Tian Liangwei's eyes, he then said:

"If that's the case... I have an idea."

Xu Yun quickly asked:

"What idea? Could you share it?"

Tian Liangwei gestured out the window to a certain direction and said:

"Let it grind soy milk for the cafeteria."

"Grind soy milk?"

Tian Liangwei nodded slightly and explained:

"Your generation might not appreciate it, but for us older folks, we know that stone-ground soy milk and rice milk, despite having larger grains, have superior taste compared to mechanically processed ones."

"It's like hand-washed clothes being cleaner than machine-washed ones, non-industrial methods are replaced by industrial ones primarily because of efficiency and labor cost, not quality."

"If I remember correctly, there's an empty pen behind the East Garden Restaurant's kitchen, used for temporarily housing cattle and sheep in the past."

"Now it's different, beef and mutton are delivered post-slaughter, leaving that area unused."

"Moreover, our School of Life Sciences' departments of Medical Biotechnology and Cell Biology occasionally need hoofed animals' blood or cells, and Physics sometimes require livestock for experiments, having this donkey around would be very convenient."

Upon hearing this, Xu Yun fell into contemplation.

Every Ke Da student knows.

There are three cafeterias at Ke Da's East Campus:

Constellation Restaurant, East Garden Restaurant, Food Court.

Among them, Constellation Restaurant is a Halal canteen, frequented by the international friends at school.

The beef buns at Constellation Restaurant only cost 1 yuan, they're thin-skinned and generously filled, very delicious.

The Food Court is a mix of various vendors, ideal for immortal cultivation.

As a result, the standard school cafeteria is the East Garden Restaurant.

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 299 185: The Placement Issue of Brother Lv (Thanks to Boss Chake Xing for the Alliance Leader reward!!!)\_2**

[ 1,211 words ]

Ke Da recruits only 2000 people annually, so the number of students has always been relatively small. East Garden Restaurant sees a daily traffic of around one to two thousand people each morning.

Excluding students who drink porridge, there are about a thousand who opt for soy milk or rice milk products.

A cup of soy milk is typically 200 milliliters. For a thousand people, that's 200 liters.

Additionally, there's rice milk for rice rolls and such.

Calculated this way...

Maybe Brother Lv finds this acceptable?

Besides his main job, Brother Lv can also contribute a bit to the research Tian Liangwei mentioned.

Although Ke Da doesn't officially conduct research on hoofed animals, small amounts of cell research occasionally occur.

It's the kind of scenario where it might be needed, but there's no necessity to keep one specifically.

The same goes for physics.

Now, if Brother Lv can secure the main job in the cafeteria, these projects would have a convenient sample source.....

And if Brother Lv can stay on campus, Old Su can occasionally meet him...

With this thought, Xu Yun clapped his hands:

"Alright, let's do it your way!"

With things at this stage, the rest was simple:

Then Tian Liangwei, acting in his capacity as dean, contacted the person in charge of East Garden Restaurant, leading Brother Lv to the feeding trough.

After some gesturing, Brother Lv's mood finally began to stabilize—he took the initiative to move to the millstone and assumed a grinding posture.

Thus.

Brother Lv's appointment issue was completely resolved.

.....

Three days later.

Same old South Lane Cat Cafe.

Though Xu Yun experienced over a year of ancient life in the 1100 dungeon, even causing a major coup,

in reality, the timeline has barely moved past the end of Ke Da's pest control conference.

Everything still feels 'new'.

Inside the cat cafe.

At this moment, Gu Qunqing was wielding a fountain pen, signing his name flamboyantly on an agreement.

After signing.

Sitting opposite, Xu Yun smiled slightly and proactively extended his hand to Gu Qunqing:

"Mr. Gu... oh no, Aaron, on behalf of Huadun Biotech's executive board, welcome to our team."

Gu Qunqing quickly put down the pen and shook Xu Yun's hand firmly:

"Chairman Xu, from now on, I'm under your command, please take care of me."

Xu Yun shook his head and corrected:

"Aaron, my main focus is on research. There's no need for overly commercial jargon."

"I'm not accustomed to English nicknames, so if possible, just call me Xiaoxu or Dr. Xu."

Xu Yun's words were not only polite but also meant to indicate his stance.

Although he is a top student, he has always firmly believed in one thing:

Professional matters should be handled by professionals.

Therefore, regarding the established company, his long-term division of labor is clear:

Research tasks are his responsibility, and he holds the final voting power.

But the detailed commercial products, public relations, and media matters are handed over to more specialized personnel.

Gu Qunqing is undoubtedly such a professional.

Whether it's his education at GSB, his past role as the regional executive vice president for South American Region at Sanofi, or the capabilities he demonstrated in plant location discussions, all perfectly align with Xu Yun's goals.

It's just that before the Ke Da pest control livestream started, Gu Qunqing had some lingering doubts.

So over the past period, he had only temporarily signed a consultant agreement with Xu Yun.

Now, with the success of the Ke Da pest control livestream—or rather, the proof of Imidacloprid's effectiveness—Gu Qunqing formally expressed his desire to sign an employment agreement with Xu Yun.

That led to the scene above.

Looking at the employment agreement in front of him, Xu Yun also felt relieved.

An MBA from GSB 4.2, an EVP from Sanofi's regional branch, at the peak of his career, with an impressive track record.

Truth be told.

If not for his background at Ke Da and Gu Qunqing's personal inclination, he would barely have a chance to attract such an elite.

Perhaps, in some way...

He should be thankful to cockroaches?

Xu Yun then dispelled this odd thought, glanced around, and seeing no one nearby, asked:

"Aaron, do you have any suggestions for the company's future development?"

Gu Qunqing took a sip of coffee and said:

"Dr. Xu, I've considered this aspect before. First, we need to tackle the company's talent issue."

"Talent?"

Gu Qunqing nodded, gesturing between Xu Yun and himself:

"Ordinary employees are easy to find these days, whether it's receptionists, customer service, or finance personnel—of course, skilled and reliable finance staff might be slightly difficult to find. Yet with New Creation Fund, that's still easy, since funds are essentially all about dealing with money."

"But when I say talent, I mainly refer to three aspects: public relations, research talent, and cybersecurity experts."

Xu Yun paused momentarily, stirring his coffee cup with a spoon:

"I can understand research talent, and I have plans in this area, but what do you mean by public relations and cybersecurity?"

Gu Qunqing sat up and explained:

"Public relations is abbreviated as PR."

"Many young people, influenced by some works or films, may think PR involves cozying up or even illicit transactions."

"But in reality, PR is a very legitimate and crucial department, connecting with society, other companies, and even official entities over the long term."

Xu Yun nodded thoughtfully; he'd heard of such things.

For instance, Penguin and Ali.

Their PR departments often hire retired officials, and they have separate public-facing departments for this purpose.

Even Ke Da and most universities have PR departments, although their numbers are relatively small.

These university PR departments engage with society and education departments annually, so when certain issues emerge, they can respond quickly.

After a pause, Gu Qunqing continued:

"Dr. Xu, although our company is in its infancy, it doesn't take a genius to see our product's potential threat."

"The pest control livestream was both a promotion, and an exposure to our competitors' views. Currently, with just one product, it's almost like playing with open cards."

"Thus, it's foreseeable that once our product launches, it might face opposition across various channels, with PR pressure possibly even outweighing the research side."

Xu Yun's heart tightened with these words.

Due to certain barriers, he is somewhat unfamiliar with PR's specific roles.

But he is very familiar with the phrase "commercial competition".

In his previous life, he worked at Chengfei for quite a few years. Though he was in civilian research, he did witness a lot regarding commercial competition.

He often encountered our old neighbors, the Little Baka.

Personally, he doesn't like Neon People, but he can't deny one thing:

Our neighbor is practically at max level in minor tactics!

And in today's Imidacloprid market.

Neon Corporation's overall share actually surpasses that of European and American companies.

Once they notice a market disruption, unimaginable media pressure is sure to follow.

Then, despite Imidacloprid's effective pest control, it might still face failure risks.

In the commercial realm, being strong doesn't necessarily mean you can overpower the opponent.

Sometimes, dealing with shameless tactics, they might directly implement a technology blockade—like Bagration in the past or the recent chip ban, flipping the table altogether.

While Xu Yun lacks the ability to intervene or comment on international disputes, considering Huadun Biotech's domestic market aspirations, a proper PR team indeed needs to be formed.

After a pause, Xu Yun asked again:

"Then Aaron, what do you mean by cybersecurity experts?"

.....

Note:

Yesterday, I accidentally used Tian Liangwei's real name... It's been a while since I wrote about real-life settings.

Anyway, no further explanation is needed because commenters have already guessed it. To put it simply, it's a pseudonym to avoid sensitive use.

Thanks for the Alliance Leader reward from Tea Guest Travel Boss. Extra update tonight!!!

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Tip: You can use left, right keyboard keys to browse between chapters.

## **Chapter 300 186: The Once Chinese Hacker Legend! (Alliance Leader Adds More!)**

[ 866 words ]

"Network security, huh..."

Hearing Xu Yun's question.

Gu Qunqing paused for a few seconds and said:

"Dr. Xu, let me ask you a question first."

"Let's not discuss the BAT level internet companies for now; just consider the company I previously worked for, Sanofi. Can you guess how many times it gets attacked by hackers in a year?"

"Sanofi?"

Xu Yun blinked. Why did it feel like discussing an ex with a current partner?

But soon.

He pushed this strange thought to the back of his mind and began to seriously think about Gu Qunqing's question.

Sanofi is also a well-known pharmaceutical company, with its main strength in the diabetes sector.

Currently, it ranks between 5th and 8th in the global pharmaceutical field, with annual revenues of several billion US Dollars, essentially belonging to the first-tier giants just below the top echelon.

However, in the world's top 500 companies, Sanofi's ranking isn't particularly high.

It fluctuates between 270th and 300th place, occasionally breaking 250.

Such a company would undoubtedly face numerous public relations challenges, but since its main business isn't like that of internet companies online, theoretically, it shouldn't encounter too many hacker attacks...

Thinking of this.

Xu Yun pondered briefly and gave a number:

"A year... ten thousand times?"

Ten thousand times a year, which averages out to thirty times a day, shouldn't be a small number.

"Five thousand times?"

Hearing Xu Yun's answer, Gu Qunqing gently shook his head:

"Dr. Xu, you should know that the OSI has a 7-layer network model, and the commonly used layers are the link layer, network layer, transport layer, and application layer. The application layer is where we ordinary people are active every day."

"Directly targeting the application layer, hackers often use DDOS traffic attacks."

"This involves using a packet sender to amplify zombie traffic, occupying bandwidth with huge traffic, causing server paralysis."

"For this type of attack, Sanofi's headquarters alone suffers no less than..."

"Two million."

Upon hearing this, Xu Yun's pupils shrank suddenly.

Two million?

On average, 7,000 times a day?

For a company ranked over 200 globally, whose main operations aren't online, to suffer 7,000 attacks a day at its headquarters?

Seeing Xu Yun's astonished expression, Gu Qunqing smiled and said:

"Surprised? Actually, this is quite normal. After all, although pharmaceutical companies operate on an offline production model, various data are inseparable from the internet."

"For instance, various experimental reports and drug trial data need to use cloud storage, and they can't all be covered by a local area network."

"This provides a basis for network attacks."

After speaking, Gu Qunqing pointed to the phone next to Xu Yun's coffee cup:

"Dr. Xu, you can search another keyword: 'Ma Yun 1.6 billion times.'"

Xu Yun picked up the phone and searched for the keyword Gu Qunqing mentioned.

A moment later.

His eyebrows raised once more:

"Goodness, Ali faces 1.6 billion attacks every day?"

Gu Qunqing adjusted to a more comfortable position in his seat and explained with a smile:

"That's right, although Ali's number is related to its internet characteristics, it still illustrates certain situations well."

"Generally speaking, a Fortune 500 company faces no less than a million DDOS traffic attacks annually."

"Regarding TCP/TST attacks, the frequency might be lower, perhaps a dozen times a day, but these attacks are more lethal."

"If such a company suffers an incident, given its Fortune 500 size, the minimum loss could be millions of US Dollars, and the upper limit is unknown."

Xu Yun slowly put down the phone, nodding thoughtfully.

He always knew network security was important, but he didn't have a detailed, intuitive concept.

This was the first time someone had provided him with an accurate description through data, and it was quite impactful.

According to his original plan.

For the company's network security, it wasn't necessary to just find a few random people, but there was also no need to build an overly robust internet defense system.

After all, there was only so much money on the books, so saving a bit was beneficial.

He even planned to hire a few reliable seniors to handle this, given that Ke Da had several experts in the field of computer science.

But now it seems...

His plan obviously needed some modifications.

He then took a deep breath and looked at Gu Qunqing:

"Aaron, do you have any good recommendations for experts in network security?"

Gu Qunqing raised his eyelids to glance at him, seemingly contemplating something, and finally asked:

"Dr. Xu, have you heard of a person named Xiaorong?"

"Xiaorong?"

Xu Yun was momentarily stunned, then blurted out:

"You mean the one who created Flowing Light and Su Xue, one of the main forces in the hacker battle back then?"

Gu Qunqing looked at him with slight surprise; he was originally prepared to introduce it to Xu Yun:

"Dr. Xu, you actually know about this?"

Xu Yun nodded heavily and said:

"Of course I do. I know an old single guy called Fisherman who participated in it back then!"

Speaking of the development history of the Chinese internet, one has to mention something:

The Eagle-Rabbit Hacker War.

The background of the event has a direct relation to 92118 (read backward, it's said that writing it directly could get the chapter blocked).

In short.

After the event spread, the general public was agitated, and tensions rose again.

The Red Alliance blew the horn at an opportune time, declaring their intention to plant their flag on the opponent's websites.

For a while, young hackers flooded into the battleground like a tide.

Actually.

There were two main organizers of the entire event.

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