

# I Can Meet with Dead Scientists

**- Chapter 101 - 94: 1,000,000 Little Cuties! (Big - , Cockroach Extermination!!!)\_3 -**

## **Chapter 101 - 94: 1,000,000 Little Cuties! (Big - , Cockroach Extermination!!!)\_3**

[ 1,115 words ]

**Chapter 101: Chapter 94: 1,000,000 Little Cuties! (Big Chapter, Cockroach Extermination!!!)\_3**

"Alright, Old Ye, activate the T6-level promotion channel now!"

Ye Xu was momentarily stunned:

"T6 level?"

Gong Zenghui nodded emphatically:

"That's right, T6 level."

As a top live streaming platform, Bilibili naturally has a certain grading system for live stream promotions, ranging from T1 to T6 in ascending order.

However, under normal circumstances, what users usually see is T5-level promotion, which means banner ads on the live stream page and login page.

As for T6 promotion, it is practically rare enough to see once in a blue moon.

This level of exposure is significantly higher than regular promotions, but it comes with the risk of certain user attrition. The main method is.....

Sending private messages and SMS!

The most recent T6-level promotion was for a Harry Potter mobile game, where every user above level 2 received a notification, elevating the game's popularity to an extraordinary level in no time.

Of course, there were also a lot of criticisms.

Gong Zenghui, as the CTO of the technology department, had the authority to use T6-level promotion, but he also needed to take responsibility for the consequences of activating the promotion.

If the long-tail revenue from the promotion falls below the user loss, he might even face the deduction of his stock option bonuses, which is no small number.

It could be said that Gong Zenghui staked a significant bargaining chip for this live stream!

A few minutes later.

In the command room, Xu Yun suddenly felt a vibration from the phone in his pocket. Upon opening it, he found a notification SMS:

"[Bilibili]Dear Bilibili user, the Ke Da cockroach extermination live stream is currently steaming hot, copy the SMS code to open the client and enter the live stream room!"

Looking at the message in his hand, Xu Yun blinked, ready to say something to Tian Liangwei.

But as soon as he turned his head, he saw his teacher also holding a phone, showing a Bilibili private message.....

Seeing Xu Yun looking at him, Tian Liangwei nonchalantly turned off the screen:

"My granddaughter likes to use my phone to watch kitten videos, so I downloaded the app, don't be too surprised."

"But I clearly saw Jia Ran Grand Commandant and plaza dance, the homepage's smart promotion is based on what you frequently watch..."

"Xiaoxu, I think you should consider changing some external reviewers for your graduation thesis next year, I think Professor Linshan from National Science University is a good choice."

"...It's normal for kids to play with phones, but you need to manage the time well, or it will be troublesome if it damages their eyesight."

"Hmm, watch the live stream."

"..."

Meanwhile, as Xu Yun and Tian Liangwei were conversing, the number of cockroaches at the extermination site surged once again.

However, this time the cockroaches didn't emerge from the pipe openings but from several sewer entrances that Ke Da had opened in advance!

Their numbers grew from a dozen to thirty or forty, with many even forming thin, long black lines.

From the drone's aerial view, even without zooming in, you could clearly see those moving black lines, some stretching over twenty meters!

At this point, there were hardly any negative comments visible online.

Due to deep immersion, something weird was happening on many live streaming platforms:

The number of bullet comments was decreasing, but the backend showed the real number of viewers was increasing.

At this moment.

In university dorms...

In residential housing...

On subways and in open squares...

In some Wi-Fi-enabled cafes and restaurants...

Even in multimedia rooms of some biochemical companies...

A large number of people of different ages, professions, and genders, whether alone or gathered, were focused on this unprecedented cockroach extermination battle.

Twelve noon sharp.

By now, it had been two hours since the first generation of cockroaches consumed the gel bait, and the transmission generation of Imidacloprid reached nearly the third generation.

On-site at several extermination points, cockroaches had already piled up in the center, forming a heap over five meters wide and nearly fifteen centimeters tall, emitting a sticky stench.

Throughout the East District's plastic pipelines and sewer entrances, cockroaches crawled out every minute.

This scene still fell short compared to the previous one at Building 14, given that the entire East District covers a much larger and complex area than a single dormitory building.

Nevertheless, any place has its limits, and with enough time, even the remotest and deepest areas can be affected.

Around twelve thirty.

The range of pheromone spread finally reached a certain boundary, stirring some deeper existences.

In the southeastern part of Ke Da's East District lies the largest sewage conduit of the entire campus.

This conduit, whether in terms of age or specifications, far exceeds those near Building 14.

Nearly a third of the East District's domestic wastewater discharges from here, and given Ke Da's location in central Luzhou, this could be considered a core sewage node of Luzhou City.

The conduit burrows deep beneath the ground, blending with the surrounding soil over the decades.

Seven or eight meters below the pipeline.

This area is soaked with sewage, dark and damp, devoid of light.

Bacteria thrive, filthy beyond measure.

This area has been hollowed out into intricate little paths, with huge brown cockroaches huddled closely together.

Some are resting, some mating, and some digesting food.

Nestled among the gaps between the cockroaches are numerous transparent cockroach eggs, nurturing the next generation of nymphs.

From a cross-section perspective, this area's thickness might only be seven or eight centimeters, vastly different from the meters-long hollow depths of an ant nest.

But if viewed with planar equipment sweeping across, you'd find this area deceptively continuous, covering an area no less than...

five soccer fields!

This is the world hidden in the shadows, the stronghold of Ke Da cockroaches, their paradise.

Cockroaches don't have a king as ants do, but when their numbers grow large enough, they can produce a mutant leader-like 'pseudo-queen.'

Cai Cai Zi is such a mutant pseudo-queen, reaching 8.5 centimeters in length, twice the size of an ordinary cockroach.

It burrows in the nest daily, rarely venturing out.

Today's Cai Cai Zi was no different, its two antennae swaying erratically, its mutated enlarged abdomen nurturing its next generation of offspring.

But gradually, a faint, peculiar scent began to stir within its sensory organs.

Stimulated by this scent, Cai Cai Zi suddenly felt an emptiness so deep it penetrated its marrow, as if something far away was beckoning it.

Unconsciously, it began to move its body outward.

And along with it, other subterranean kin began to crawl out —

A million cockroaches.

.....

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## **Chapter 102 - 95 Swarm of Locusts Attacking the Face**

[ 1,910 words ]

### **Chapter 102: Chapter 95 Swarm of Locusts Attacking the Face**

Due to the extensive length of the core sewage channel in the East District, which also contains multiple drainage outlets, the coverage area is close to one-eighth of the East District.

Therefore, although the command center judged that a terrifying number of cockroaches should be gathering in this channel, it was challenging to determine from which drainage outlet they would emerge.

So when securing camera stations earlier, the command center simply employed an exhaustive method and placed cameras outside each drainage outlet.

There are over sixty cameras in this batch, and their numbers are quite low in the entire extermination live stream, so most of the camera views had only about seven or eight hundred scattered viewers.

Guo Hongshun, who was studying at a vocational high school in Min Province, was one of these wandering viewers. At this moment, he was idly watching in the live stream room numbered 255, gently scrolling down the list on the right side of the screen with his index finger.

The camera station 255 was recording a tree-lined path about one and a half meters wide. Like its number, this path was somewhat secluded in location.

Ordinarily, besides some couples in love... ahem, dating couples, few people would pass through here.

In the past hour or so, although some cockroaches did occasionally appear on the path, the number and appeal compared to a few popular camera stations were of a completely different level for station 255.

In fact, Guo Hongshun just happened to click into this live stream room; as soon as he found a view that interested him, he would leave without hesitation the next second.

Yet as he continued scrolling, Guo Hongshun suddenly felt that something seemed off:

The position of the camera station selection list was on the right side of the screen, occupying about a third of the horizontal screen width, and it covered up the original image in that area, rendering it a blind spot.

At this moment.

Right on the edge of that covered list, a small patch of shadow was slowly expanding!

This shadow moved like a water stain spreading on the ground, slow yet distinctly extending outward.

Within a few seconds.

The shadow grew from the size of a needle tip to the size of a fingernail, and then nearly a bottle cap.....

Witnessing this scene,

Guo Hongshun, not realizing yet, instinctively tapped elsewhere on the screen to hide the pull-down list.

As the list disappeared, the part of the image that had been blocked—the main part of the shadow—was immediately revealed before Guo Hongshun's eyes.

Thud.

With a dull thump, Guo Hongshun's phone fell onto the quilt, having a close encounter with the padded quilt and the wooden bed frame underneath.

The next moment, this 189 cm tall, 160-pound man from the Northeast shuddered all over, letting out a terrified shout from his mouth:

"Oh my god, it's full of cockroaches aaahhhh!!!!"

Guo Hongshun's voice traveled far, and his cellphone, which had fallen onto the quilt, continued to dutifully broadcast the stream:

In the left half of the screen, from the drainage outlet beside the path, innumerable cockroaches were crawling out.

Rustling, numbering countless!

In less than ten seconds, the cockroaches occupied nearly half the width of the path!

After half a minute more, these little critters completely claimed the entire road surface of the path.

From a high altitude, one could see a black river slowly extending along the path, heading straight for...

Guo Moruo Square!

As Guo Hongshun witnessed this terrifying scene, the command center located in Teaching Building 1 also noticed the anomaly in this camera station.

Director Guan, responsible for general management and logistics, quickly walked to Tian Lianwei's side and said:

"Dean, at the 255th camera station on the Spring Garden Path, a large force of cockroaches has been discovered. Judging from the scale, it's likely the core main force of the on-campus cockroaches!"

Tian Lianwei immediately raised an eyebrow:

"Oh? Quickly switch over to take a look!"

Director Guan nodded, took out a remote control, and pressed a few times.

Soon, several images appeared on the command center's main screen.

About three minutes had passed since the image had begun, and the number of cockroaches had grown significantly larger than at the start.

A densely packed black river stretched over thirty meters long, grandiosely reminiscent of the army ants once seen on "Animal World."

Director Guan then circled a few spots on the screen with an infrared pen, speaking like a classroom teacher:

"These are several critical camera stations between Spring Garden Path and Guo Moruo Square. Today, the campus is under a southeast wind, and the wind direction is stable.

Adding to that the motion trajectory of some poisoned cockroaches, it's not unexpected that the large cockroach force will follow the path 255-231-201-197."

Tian Liangwei pondered for a moment before asking:

"Director Guan, how many cockroaches are in this force?"

Director Guan shook his head, a faintly visible tremor on his face:

"I'm not sure, but according to the assistant researcher He Jiajia in the insect laboratory, just the number of cockroaches we can see is no less than two hundred thousand, and the count is still increasing. Moreover, there's also..."

"Also what?"

Director Guan hesitated for several seconds:

"Let me show you."

Subsequently, he fiddled a bit, and the screen quickly switched to another camera station.

At the instant of seeing the image, a few female colleagues in the command room screamed out:

"Ah!!!!"

In the picture, that is, on the camera lens, there was a thick layer of cockroaches covering it!

Slender leg hairs, swollen abdomens, brown backs, and some sticky fluids.....

Tian Liangwei also felt a tingling at the scalp, and after regaining composure, he shot an inquisitive glance at Director Guan.

Seeing this, Director Guan quickly explained:

"Dean Tian, as you can see, the cameras at several extermination points have already been overrun by cockroaches.

Although we have pre-emptively implemented protective measures for cables and equipment, ensuring the devices themselves and signal transmission do not encounter any major issues.

But this way, the footage each camera can record is greatly affected....."

Tian Liangwei seemed to be in thought, then asked:

"I get it. Is it that after the image is affected, the audience's resentment in the live stream is high, and you plan to close these perspectives temporarily?"

However, to his surprise, Director Guan shook his head:

"Dean Tian, you guessed wrong. On the contrary, it seems that due to some kind of curiosity, the number of viewers in these live streams covered by cockroaches is actually increasing.

Among them, the most popular live stream has already reached 1.3 million real viewers, and some people are even shouting things like Cockroach Lady..."

Tian Liangwei: "???"

Xu Yun, standing nearby, was also a bit dumbfounded. Has the public's XP become this open these days?

In fact.

Besides Ke Da's official live stream, the images were also affected in other official media or self-media.

Unlike Ke Da, which has multiple perspectives to choose from, these media basically only have aerial drone shots, besides fixed positions.

Indeed.

Due to curiosity, many people might temporarily be interested in or curious about the cockroach face-pouncing perspective.

But over time, this temporary psychological effect will gradually fade, and the demand for normal perspectives will be brought up again.

Also, from the perspective of the media's authority, they must record the real scenes.

So at this moment, in the temporary resting point for external media, several media outlets are also discussing plans internally.

"Click—"

Zhang Xiaojie, the team leader from Sichuan Province Observation, lit a cigarette, took a deep drag, and exhaled a cloud of nicotine-laden smoke with some irritation.

As a relatively authoritative official media with not too much black history, Sichuan Province Observation's purpose for coming to Ke Da this time is fairly objective, having prepared a few contingency plans beforehand.

These plans included the possibility that Ke Da wasn't lying and that there really was a cockroach eradication going on.

This can be seen from their ability to invite experts like Ouyang Li to give commentary—they indeed regarded this trip to Ke Da as an interview rather than a farce.

However good the contingency plans were, they couldn't have imagined that Ke Da could create such a huge spectacle, nor did they know how many cockroaches might exist in a school.

After all, unlike Ke Da, they couldn't create biological models to roughly estimate the number of cockroaches on campus.

Just look now.

The writhing cockroach "river" looks terrifyingly like a swarm awakening in a starry sky.

In conclusion.

As the situation evolves, Zhang Xiaojie and others found that the cameras they brought have become useless.

Just as Zhang Xiaojie was smoking, troubled, his assistant Li Rulin hurried over:

"Boss."

Zhang Xiaojie quickly straightened up and asked hopefully:

"How's it going? Does Ke Da have a way?"

Li Rulin shook his head and sighed:

"Ke Da said they can only provide a few remote sensing robots, primarily used as reserve technology for disaster exploration.

Besides being cumbersome and complex, the footage quality they produce is very poor and might have the opposite effect when uploaded online."

Zhang Xiaojie's eyes visibly dimmed, and he said, unwilling:

"What about the media van? Can we drive our media van in? Like in a wildlife park?"

Li Rulin still shook his head:

"Director Guan from Ke Da was very firm, telling me that the extermination center does not allow any vehicles to enter.

Firstly, they fear vehicles might disrupt the existing toxin dispersal process, and secondly, they're worried cockroaches might crawl into engines, causing some severe and unnecessary consequences..."

Zhang Xiaojie sat back on his chair silently, speechless for a long time.

The cockroach troops on Spring Garden Path have gradually attracted the attention of all parties. Based on the distance and the movement speed of the cockroach troops, it's estimated that these little darlings will reach Guo Moruo Square in fifteen minutes.

If they can't get footage from the extermination center, a large number of viewers will likely choose to switch channels next.

For the platform, viewers switching channels does not have any impact—in essence, it's just switching from one hand to the other, keeping the total mass constant.

But for the channel media, this would be a significant traffic loss incident.

If it were to be seriously investigated, it might even be internally classified as a live stream accident!

Just as Zhang Xiaojie was troubled, a weak voice suddenly came from behind him:

"Director Zhang..."

Hearing this, Zhang Xiaojie turned around and found it was Chen Shanshan, who was responsible for front-end commentary.

Feeling somewhat vexed, Zhang Xiaojie's mood was not so bad as to lash out at the soft-spoken young lady, but his tone was a bit stiff:

"Oh, it's Xiaochen, what's up?"

Chen Shanshan glanced at him and still spoke weakly:

"Director Zhang, I've heard that apart from the drones, the cameras at the other points are unable to capture much anymore?"

Zhang Xiaojie nodded slightly:

"That's right."

"...Are there any solutions?"

"None."

After a few seconds of silence, a glimpse of decisiveness flashed in Chen Shanshan's eyes:

"Director Zhang, I have an idea."

With impatience, Zhang Xiaojie glanced at her and frowned:

"What idea?"

"I'll wear protective clothing and go in with the equipment to broadcast live."

....

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

## Chapter 103 - 96: I Am Actually the Cockroach Lady

[ 1,332 words ]

### Chapter 103: Chapter 96: I Am Actually the Cockroach Lady

Inside the media station.

Upon hearing Chen Shanshan's words, Zhang Xiaojie was momentarily stunned and blurted out without thinking:

"Xiaochen, are you crazy?"

Chen Shanshan shook her head. She still appeared soft and adorable, but her tone was firm:

"Director Zhang, aside from sending someone in to stream live, do we have any other options right now?"

The media vehicles can't get in, the drones can't come down, and aerial footage and ground shots are on two completely different levels.

If that's the case, we can't just sit here and wait, can we?"

Zhang Xiaojie opened his mouth but didn't know how to refute her.

Just as Chen Shanshan said.

If a drone descends to a certain height, the swarming cockroaches would affect the drone just like they do with stationary cameras, causing the screen to be completely obscured by them.

But if they maintain a certain altitude and do aerial shooting, the quality of footage looking down and ground-level footage is obviously different, and it's easy to get aesthetically fatigued from bird's-eye views.

This is something you can clearly feel from the annual popular African wildebeest migrations.

Of course.

With the current level of technology, it's not really difficult to keep cockroaches from staying on the camera lens.

But the problem is... Zhang Xiaojie and his team didn't bring such equipment this time—who would have expected Ke Da to create such a situation?

After all, not everyone is like Li Changshou, considering the possibility of an alien invasion whenever traveling.

Thus, as things stand now, sending someone into the extermination center seems to indeed be the only way.....

Seeing Zhang Xiaojie somewhat persuaded, Chen Shanshan tightened her little fist a bit more:

"Director Zhang, I just spoke with the staff at Ke Da, and they can provide a modified polyethylene airtight protective suit which can completely isolate the harmful impurities in the cockroach heap.

So the risk of going in to stream live is mainly psychological. You don't need to worry about that, I can look at pictures of Zhang Han's eyes for ten minutes!

Moreover....."

Zhang Xiaojie glanced at this girl and asked:

"Moreover what?"

"Moreover, if we can provide such a perspective for live streaming, it will definitely attract a massive audience!"

Chen Shanshan's last sentence was like a flash of lightning in the dark, which not only shook Zhang Xiaojie's mind but also brightened his eyes:

Indeed, if only Sichuan Province Observation can provide an inside view, wouldn't we still retain the audience?

Even if other media colleagues catch up later, Sichuan Province Observation can still take a large share during this time gap!

With this in mind, he no longer hesitated and decisively told Chen Shanshan:

"Xiaochen, then sorry for the trouble!"

And as Chen Shanshan prepared the protective suit and the live stream, the cockroach army on the Spring Garden Path was advancing rapidly.

The instantaneous movement speed of cockroaches is very fast, averaging 0.6 meters per second, with a peak that can even exceed 1.5 meters per second.

That's why when you throw a book at a cockroach, it's quickly out of sight, and when you open the book, you don't even see a leg hair.

However, when cockroaches start marching in formation, this speed becomes relatively slower.

The sustained marching speed is about four to five kilometers per hour, maybe not even ten kilometers.

At this time, Cai Cai Zi was located at the center of the cockroach army, slowly leading them forward.

In most cases, cockroach mutations occur in drug resistance, meaning insecticides cannot kill them after a while.

Sometimes they even swagger in front of you, while playfully drinking the insecticide like water.

Apart from drug resistance, mutations in cockroach morphology are extremely rare, almost one in a million.

The most representative mutant cockroach found locally so far is a little cutie known as X378, displayed in the Guangdong Province Insect Museum.

It is 7.8 centimeters long, with a jade-like white body.

Compared to X378, although only a small part of Cai Cai Zi's body has turned white, its size is much larger than X378.

Not only has it reached 8.5 centimeters in length, but its width is also 1.5 times that of X378.

The front antennae are long and hard and have even developed a second pair of wings.

However, unlike ant-like queens, the pheromones of such 'pseudo-queen' mutant individuals are not broad-spectrum.

Even among cockroaches, it can only command about a quarter of the group.

About four years ago, Cai Cai Zi evolved into a pseudo-queen, and by coincidence found the largest sewage node in the East District of Ke Da, where it established a kingdom deep underground.

The lifespan of cockroaches is generally 2-3 years, some even only live two hundred days.

But perhaps due to bodily mutations, the now four-year-old Cai Cai Zi shows no signs of declining.

In its limited intelligence, it even fantasizes about one day ruling the world, expanding its territory across the entire Ke Da campus.

Of course.

More than those vague fantasies, Cai Cai Zi is more interested in the increasingly thick aroma ahead at the moment.

Its little brain doesn't have the concept of hormones, but as it smells, it feels its abdomen gradually swelling a bit...

In the entire cockroach army, countless cockroaches share Cai Cai Zi's feeling. If one could see the bottom through the 'cockroach river,' they would find several sticky puddles of lymph fluid left on the ground...

Just like that.

Seven minutes later.

The cockroach army had formed a black river at least fifty meters long, with an estimated count...

One million two hundred thousand!

Seeing this massive scene, even Xu Yun and Tian Liangwei felt a bit of tingling on their scalps.

At the same time, a topic was quietly rising from the bottom of the trending list:

#How many cockroaches are in your school#

If people were just spectating before, as the situation evolved, almost everyone started thinking about their surroundings.

Smaller local secondary schools and vocational schools are easy to discuss.

But some universities, similar to Ke Da in size or larger with more population, left some students shivering:

If Ke Da's East Campus alone has a million cockroaches, wouldn't similar-sized universities have a million or more cockroaches too?!

Especially now, with so many viewers, there are always a few unfortunates who see a little cutie slide by in their dorm while watching the stream...

Empathizing, this kind of psychological impact isn't something just anyone can handle.....

But Cai Cai Zi doesn't know the impact it and its offspring have caused online. As they got closer to where the bait was deployed, the entire cockroach community's wild nature had been fully aroused.

Five hundred meters....

Three hundred meters....

One hundred meters....

As they closed in, something seemed to appear in the visual organs of Cai Cai Zi, which consisted of two compound eyes and two simple eyes – an extremely large silhouette.

Cockroaches can see color, depth, and three-dimensional images in the dark, but their vision is worse in bright light, relying on simple eyes to assist in judgment.

But since Cai Cai Zi is a mutant individual, it can see some colors, even in broad daylight:

It was a giant, white all over, holding a black object. Feedback from the thermal imaging system suggested it was a typical bipedal creature.

In ordinary life, cockroaches would discreetly avoid bipeds, rarely provoking them.

If anything, sometimes they might lay a few eggs in their ears while they sleep.

However, under the influence of pheromones, only two voices echoed in the minds of the cockroaches:

Eat, mate!

Even for Cai Cai Zi, the pseudo-queen, it existed only with primitive instincts, without a hint of fear.

Thus, after a slight hesitation, it led the cockroach army.....

and crawled up Chen Shanshan's body.

True Cockroach Lady.

....

Note:

There's more to come, tonight we'll strive to eliminate the cockroaches!

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

## Chapter 104 - 97 The Fall of the Cockroach Empire

[ 1,856 words ]

### Chapter 104: Chapter 97 The Fall of the Cockroach Empire

At the extermination point.

Watching the cockroaches climb over her body through the hazmat suit, Chen Shanshan forced herself to suppress the creepy feeling.

Protecting the GoPro camera and keeping a calm voice, she said:

"Dear viewers, as you can see, the largest cockroach force we've found so far has reached the edge of Guo Moruo Square.

I will now follow the cockroach army into the scene to bring you a live broadcast.

If nothing unexpected happens, this should be the final battle!

I am Chen Shanshan. If you like it, please give me a monthly pass... cough, a one-click triplet!"

After saying this, rows of praising comments immediately floated across the screen:

"6666!"

"Awesome!!"

"Ocean of cockroaches, true loner!"

Seeing the popularity in the live stream room soar with each passing second, Chen Shanshan's heart steadied:

Her all-or-nothing gamble was not wrong!

As a graduate of Chuannan Media University, Chen Shanshan, like many ordinary people, was striving for her life and future.

However, in today's society, for an ordinary person, it's not hard to make ends meet, but to make a name for oneself is another level of difficulty—especially in fields related to the system.

She has no high-ranking parents, nor does she have a powerful 'sponsor.'

Chen Shanshan joined Sichuan TV three years ago, only recently transitioning from an intern to a stationed reporter in Wannan.

Even in this Sichuan Province Observation interview team, she was just a front-end commentary reporter.

Her main task was to chat with Ouyang Li to bridge the time until the cockroach pesticide took effect, ensuring the audience didn't depart from boredom.

Following the normal trajectory.

She might need to work a few more years before maybe getting a promotion to a provincial TV reporter.

Thus, when she learned from cameraman Master Zhang that the camera was blocked by cockroaches, the young girl had an idea:

This is an opportunity.

An opportunity that could change her life!

And the cost would be her walking into the swarm of cockroaches, getting up close and personal with countless cockroaches.

Then Chen Shanshan thought carefully for five minutes, becoming increasingly determined in her resolve:

Currently, the whole network's viewer count on the live stream was massive. Although she didn't have the specific backstage data, it surely had tens of millions as a minimum.

If suddenly someone starts a live broadcast while all nearby devices are rendered useless...

Not to mention eight digits, seven digits of real viewers would be no problem!

This kind of viewer base, combined with keywords like cockroach army and lone female reporter live broadcasting, would definitely stir up considerable buzz online!

With high buzz, the remaining issues were no longer of concern for Chen Shanshan.

Because there is a precedent.

The most famous case being the CCTV reporter Liu Xiaoqian.

He was originally just a regular reporter at the Latin American Center Station, but he became a sensation in 2014's "Entering the 'City of God'" by calmly entering a gang's lair for an interview.

Now, this cool guy with a gentle voice has over seven million followers on his self-media account, and his job grade has been promoted by four levels. Even if he resigns, he can still live a carefree life.

Another less known name is Yu Jinmin.

This person's name might be a bit tongue-twisting, but quite a few have watched his videos:

When Typhoon Mangkhut struck, a 280-pound reporter stood rock-solid on an empty Bund, single-handedly covering the Bund, thus getting dubbed a "typhoon-exclusive reporter..."

This person is Yu Jinmin, who was also just an intern at Beijing News.

By a stroke of luck, he went viral due to Typhoon Mangkhut, garnering over 80 million views across the internet.

Now, Yu Jinmin not only has become a full-fledged reporter, but also frequently appears in news stories.

Every year when there's a typhoon, many netizens inevitably mention him.

Thus, Chen Shanshan wasn't worried about becoming a one-hit wonder that wasted her topic traffic.

These days, even some central media know the trap of pitting genders against each other, not to mention Sichuan Province Observation, which is a mainstay for such media on the internet.

Indeed.

Given the character of internet users, she might very well get labeled as Cockroach Lady or something.

But so what?

Cockroach Lady is Cockroach Lady. At least it's a more upright opportunity than those granted to sugar daddies, and this was an opportunity earned by one's own abilities!

Then this young girl took a deep breath and proceeded alongside the cockroach army.

A few minutes later.

Apart from the action camera's lens, her protective suit was already covered with cockroaches, likely numbering no less than five or six hundred.

Moreover, due to being near the extermination center, plenty of pheromones had also clung to her, leading to the number of cockroaches on her suit continuing to increase.

Luckily, the protective suit provided by Ke Da was of high quality, without any tears or seams breaking open, otherwise, that would have been a big problem.

Crack—

With every step Chen Shanshan took, many cockroach bodies were crushed.

"You know what I just thought of?"

Walking along, Chen Shanshan gently flicked a cockroach off the lens and filming the ground, said:

"Hearing these crunching sounds, I thought of the time when I was a kid stepping on pebbles at Grandma's house, full of childhood memories....."

Seeing rows of question marks on the screen, the girl chuckled:

"Alright, alright, back to the topic, let's watch the live broadcast, look, the cockroaches are eating the bait....."

She adjusted the focus a bit, locking the view to the front.

At this moment.

Cai Cai Zi's cockroach army had already reached the central point of extermination, and before them lay the corpses of their fellow cockroaches.

These corpses exuded the enticing aroma of nerve toxins, tempting the roaches to taste a few bites.

At this point, filled with wild instincts, the cockroaches could no longer be controlled, their wings and limbs crackled.

The once barely orderly cockroach stream now seemed like it had burst through a dam.

With a clatter, they scattered, invading the square.

Some went mad, gnawing at the corpses, while others pursued the surviving third and fourth generation infected ones, engaging in the most primitive clapping for love.

Food and sex are natural instincts, the ancients were not wrong.

Hundreds of thousands of cockroaches started an outdoor party at Guo Moruo Square.

And naturally, Cai Cai Zi was among them.

Snap—

Only to see Cai Cai Zi open her strong jaws, biting off a piece of a fellow corpse, slowly savoring the marinated hind leg.

On her massive body perched five or six cockroaches, exchanging lymph fluid among themselves.

As she ate, an image of her grandfather flashed in Cai Cai Zi's mind—or rather, a genetic fragment imprinted with biological instincts.

Cai Cai Zi's grandfather was also a giant American cockroach, but had been stomped to death when Cai Cai Zi was very small.

The biped seemed to have said something at the time, but unfortunately, Cai Cai Zi was just a bug and couldn't understand human words.

Thus, Cai Cai Zi continued to gnaw, while the number of cockroaches in the square kept increasing.

Half an hour later.

The number of cockroaches in the square reached about seven hundred thousand.

Chen Shanshan stood amidst the cockroach pile, accompanied by colleagues from other media—as Sichuan Province Observation sent someone for live coverage, other media also reacted accordingly.

However, due to the time difference, Sichuan Province Observation's audience numbers were securely leading.

Meanwhile.

The discussion of the topic #Chen Shanshan# had surged to seventh place on the trending list.

Furthermore worth mentioning.

By this time, the internet was no longer filled with initial reproach.

Instead, there was admiration for Ke Da's technology and fear of the cockroach species.

Of course.

Under the posts claiming they would wash their hair upside-down, streak, or eat feces if successful, the spectators were similarly busy settling scores in autumn.

Fifteen minutes later, the number of cockroaches at Guo Moruo Square reached.....

One million two hundred thousand!

Bear in mind.

In theory, the entire East District's cockroach count was at most about two million!

Fortunately, considering Guo Moruo Square as the core extermination point, the command center had deployed a sufficient amount of bait on this square, otherwise they might have had to use drones for some air drops.

Previously, the highest cockroach pile at Building 14 appeared near the pipe outside the building, almost forty centimeters high, higher than the third-floor dormitory stack.

This cockroach pile formation was somewhat coincidental, buffered by the wall and having an actual base width of only about fifty centimeters.

The main reason was that many poisoned cockroaches flew out of the pipe mouth and fell from exhaustion, forming a gathering point upon death.

But today's cockroach situation at the square was quite different:

Director Guan of the security department had preemptively erected a circle of plastic barriers around the square, about one and a half meters high.

Healthy cockroaches could easily climb over such plastic barriers, but for the poisoned ones, they were an impassable chasm.

Thus, except for a few lucky ones who escaped, the rest of the cockroaches were 'locked' within the square.

At this time, glancing around.

The thickness of cockroaches on the ground was estimated at fifteen centimeters, densely packed past the ankles.

In the middle, a massive cockroach hill rose at the highest whiteboard bait point, about 1.5 meters high!

Countless cockroaches emitted their dying buzz across the square, accompanied by dismembered legs, antennae, and fallen wings everywhere.

The cockroach Empire that had dominated the East District of Ke Da for decades ended under the watchful eye of the world!

Although, within such a vast base, a small number of individuals were still stubbornly alive.

Cai Cai Zi was one of them.

Her two hind legs had been completely gnawed by her peers, and her body was stained with countless fluids, yet her two slender antennae continued to dance madly.

She crawled slowly through the pile of cockroaches, her body and mind extremely stimulated by the nerve toxin!

Moments later.

The greatly excited false queen suddenly erupted with a powerful energy.

Opening her four wings, she flew slowly upwards!

She flew and flew, feeling as if she had become the Sun, the sole ruler above the ground!

However, it wasn't long.

Cai Cai Zi suddenly felt dizzy, her strength drained in an instant—the targeted receptor proteins had finally closed her sodium ion channels, completely cutting off her vitality!

With an easterly wind from the northwest direction at a 41-degree angle blowing through.

This false queen fell powerlessly onto the ground.

Coincidentally, her landing spot was right in Chen Shanshan's path.

At that moment, Chen Shanshan was chatting with the audience, and with a crunching sound, she realized she might have stepped on something.

One second later.

Cai Cai Zi heard the last syllable of her life—the same as what her grandfather heard before he died:

"Ah... squashed it."

.....

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

## **Chapter 105 98 Conclusion, The Upcoming Opening of the 2nd Door (Major Chapter!!!)**

[ 880 words ]

Whoosh, whoosh, whoosh—

Guo Moruo Square.

Director Guan, dressed in protective gear, was holding a modified 'Insect Sucker', walking across the square with a dozen staff from Ke Da.

Every few steps, he would operate the device, dealing with the mountains of cockroach corpses for post-mortem disposal.

However, unlike last time,

This time, the 'Insect Sucker' was connected not to a burlap sack, but to a long pipe.

The end of the pipe led to a large capacity garbage truck.

Since Ke Da had set up barricades at several extermination points in advance, the vast majority of poisoned cockroaches couldn't escape the extermination zones until their deaths.

Thus, the entire square resembled a massively enlarged cockroach trap, tightly containing all the cockroaches within this area.

Even the thinnest pile of cockroach corpses at the site was no less than four centimeters thick.

Each time the 'Insect Sucker' was activated, more than a hundred cockroaches would be sucked in and sent into the garbage truck's container.

Alongside the cleaning crew, reporters and photographers from several major platforms quietly documented the end of the East District's cockroach Empire.

The enthusiasm online from the audience remained high, though by now the comments in the live stream chat had become significantly more harmonious, with few trolls still stubbornly complaining:

"Wow, sucking in so many cockroaches at once is so satisfying!"

"My sister just saw a cockroach on the table; now the table's been smashed by her—believe it or not, half an hour ago, she couldn't even open a cap of soluble vitamin C."

"Where can I buy this cockroach repellent? Begging for a link! T.T...."

"I want to strip naked and swim in the pile of cockroaches....."

On the Weibo trending list.

The topic #Ke Da Cockroach Extermination# had reached its peak since the start of the live broadcast.

Currently, except for the third place '#Sister Xiao Chong's female soldier role is so cool#', the top seven spots were all firmly occupied by Ke Da-related topics.

Of course,

Before allowing media access, Ke Da had already collected the remaining bait boards to minimize any leakage of their products.

Indeed,

Given the large number of media present, it's highly likely... or definitely certain that someone would quietly take some cockroach corpses for research by certain institutions.

But although there were samples of Imidacloprid residues in these bodies, most of the chemical constituents had already specifically bonded with receptor proteins.

Even the most advanced institutions could extract limited information in a short time.

At most, they could determine that the bait's ingredient was Imidacloprid, not Fipronil.

Currently, the patent for the Fifth Generation Imidacloprid was in its final stages, and with Hou Xingyuan, the president of the Science Institute, getting involved, it would be finalized in about a week.

By then, the institutions probably wouldn't have analyzed the main ingredients before Huadun Biotech's final product hits the market.

Three hours later.

The cockroaches at several extermination points had been cleared by seventy to eighty percent, and Ke Da's sanitation workers began air disinfection.

Meanwhile,

At Ke Da's media reception hall.

At this moment,

A press conference organized by Ke Da was unfolding under the scrutiny of cameras of various sizes.

The spokesperson for the conference was Zhang Rui, the executive vice president of Ke Da, as the impact of this cockroach extermination was quite significant, requiring someone of executive level authority to address it adequately.

Once the media settled down,

Zhang Rui cleared his throat slightly and asked with a smile:

"Friends from the media, does anyone still believe Ke Da is falsifying academic data?"

If you think so, feel free to bring it up, and we can discuss it further. The more we debate, the clearer the truth becomes."

His question was met with silence.

Zhang Rui, seeing this, couldn't help but feel secretly pleased.

Over the past week or so, Ke Da had endured waves of pressure from all sides, coming in like tides without ceasing.

The public opinion environment during those days was even more severe than what the school's board initially anticipated, and Zhang Rui, the initiator of this proposal, had barely rested well every day.

Besides the attacks from across the sea, numerous domestic critiques didn't fall short either.

Actually, Zhang Rui found it quite puzzling.

If someone was paid to slander, that's another story; making dirty money—right and wrong aside—at least they profit from it, right?

But some people were just bizarre.

Despite receiving no money and not engaging in normal questioning, they'd launch into unbridled criticism without restraint.

In the end, they tangled the issue into national matters, and what are they aiming for then?

After Ke Da's counterstrike, those who were paid washed their hands and left, and the baseless critics found themselves abandoned by their comrades, becoming the sole clowns.

This is almost a masterpiece painting of the world.

Then Zhang Rui paused and said:

"Since our media friends here have no objections, let's officially proceed with the press conference."

He straightened the files on the podium and continued:

"First, let's discuss the number of live viewers that everyone is interested in.

The cockroach extermination live stream by Ke Da took place on a total of 22 different platforms, including Bilibili, Migu, Weibo, Baoya, both large and small.

Out of these platforms, Bilibili had the highest viewer traffic.

Today, Bilibili's peak daily active users reached 41 million due to the premiere of 'K-On! 3' in the early morning, which caused today's daily users to be much higher than usual.

Excluding regular daily activity, approximately 14 million users were watching our live stream through different channels today....."

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

## **Chapter 106 98: Wrapping Up, The Soon-to-Open Second Door (Major Chapter!!!)\_2**

[ 851 words ]

"On Weibo, it's around seven million..."

"The Bàoyà platform is over 9.6 million..."

"Migu..."

After reporting the numbers from the major platforms, Zhang Rui took out an infrared pen and pressed it.

"According to the summary from multiple platforms, the real number of viewers focused on this live pest control event across the internet is roughly..."

At that moment.

A number appeared on the big screen at the press conference:

"43.96 million!"

Upon seeing this number, a low murmur instantly rippled through the media seats at the scene.

Though it wasn't shocking enough to draw a gasp, each reporter's posture subtly straightened a bit.

43.96 million!

Unheard of.

Due to the large population base at home, numbers in many internet-related aspects tend to be huge.

Like the Double Eleven sales figures, the count of die-hard fans, etc...

Or, for instance...

The number of live stream viewers.

Of course.

Due to some apparent methods, there's usually a large discrepancy between the platform-reported numbers and actual figures; third-party institutions' statistics are often more authoritative.

The peak data for internet live streaming, of course, belongs to the CCTV Spring Festival Gala, a super media advantage project passed down through generations over decades.

Even as viewership of the Spring Festival Gala has declined in recent years, the vast majority still instinctively peek at it on New Year's Eve.

In 2021, the live audience size for the Spring Festival Gala was 1.14 billion, with new media live stream users numbering 569 million—this figure is honestly not very comparable as it's unique nationwide and even globally.

Setting aside the Spring Festival Gala, there are two peak figures for single-platform live streams.

One is from last year on December 17th, when Westlife held their first global online concert.

At that time, the concert was live-streamed via WeChat's video account, with domestic real audience numbers reaching 15 million.

The other is from July 29th, 2021, during Liu Dehua's 40th-anniversary debut live stream, dubbed 'slightly less handsome than readers.'

Officials claimed over 100 million online viewers, but the actual real count was around 11 million.

As for the all-platform record, it was set on March 23, 2018, during a major match between China and South Korea.

At that time, multiple platforms including Migu, CCTV5, and iQIYI streamed the match.

Due to the circumstances, three minutes after Yu Dabao scored a goal, the total online audience count reached 110 million. (Note: the National Day ceremony was mainly on TV)

The next closest figure was during the same year's IG championship night at the S series, with a domestic total audience count of about 37 million.

Though this number has a bit of a loophole, counting every campus IP as 2.3:

The reason being in a dorm room, many people watch on one computer.

The logic sounds reasonable at first, but during other streams, does everyone only watch their own computer?

In any case.

The current broadcast from Ke Da has reached 43.96 million viewers, officially surpassing the viewership record of IG's championship night, making it the second-highest in all internet live streaming history!

This is undoubtedly a number that can be etched on the internet's milestone!

Alongside bearing witness to this glory are the little darlings on the ground...

Zhang Rui tactically cleared his throat again and casually switched the screen to the next page.

The next page's numbers are much smaller than the live audience count, but the headline in front is somewhat nerve-wracking:

Cockroach extermination count:

1,844,213.

1.844 million cockroaches!

Zhang Rui circled the number with the laser pointer and explained:

"According to Ke Da's previous model estimate, the East District might have around 1.5 million cockroaches.

However, considering Ke Da's downtown location, with many residential living areas nearby, cockroaches from the Central Campus might also be attracted here by various chance factors.

So, the extermination command center deployed enough bait gels to eliminate 2.5 million cockroaches, which now seems like a very smart decision."

Upon hearing this, a reporter raised their hand in the media section:

"Academician Zhang, how did your school calculate this number?"

Zhang Rui lifted his eyes and glanced over, noticing the question came from Ji Mu News:

"We used an extended listing estimation based on the number of cockroaches per unit volume, employing cross-tab algorithms and probability theory.

Finally, with the assistance of Ke Da's 'Lu Yan' supercomputer, we derived this figure, which shouldn't deviate much from the actual number."

The reporter from Ji Mu News below nodded with a semi-understanding nod and continued:

"So, Academician Zhang, Ke Da has three campuses: East, Central, and West. With the East District already completed, will the West and Central Districts proceed to the next extermination round?"

Zhang Rui gave a slight nod, chuckling as he replied:

"Of course, but the next extermination may not have as much hype, nor as large a scale.

We'll notify the specific timing through our media office; just stay tuned to the invitation and Ke Da's official Weibo."

After the Ji Mu News reporter sat down, another female reporter from Wannan Tuantuan raised her hand:

"Academician Zhang, I have a question."

"Please go ahead."

"Will the cockroach pesticide Ke Da used for this extermination be available for sale?"

Once this question was raised, the entire media section... or rather all viewers following the live stream, were at once uplifted.

A moment later.

A barrage of 'Good question' comments quickly filled the screen.

Zhang Rui glanced discreetly towards Tian Liangwei and Xu Yun in response.

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

## **Chapter 107 98: Conclusion, The Soon-to-Open 2nd Door (Major Chapter!!!)\_3**

[ 688 words ]

Then he spread his palms and addressed Xu Yun in the audience:

"This question will be answered by a professional. Dr. Xu, please."

Seeing this, Xu Yun stood up from the audience, brushed off his coat, and sighed internally with mixed emotions:

This favor from USTC is really a big debt to repay...

As he approached the podium, Zhang Rui smiled and patted him on the shoulder and said to the audience:

"Let me introduce to you, this is Dr. Xu Yun, a genius from the USTC young class.

Currently twenty-four years old, about to graduate with a doctorate.

He is also the initiator of this cockroach extermination campaign, and the inventor of the insecticide gel bait.

He is an expert on matters related to the gel bait, so he will be presenting to you."

Sparse applause quickly sounded from the audience.

In his previous life, Xu Yun had attended many high-level discussion meetings, so apart from gratitude towards USTC, he wasn't too nervous at this moment.

He took the microphone, adjusted it for a few seconds, and then said:

"Hello to all media friends and live stream viewers, I am Xu Yun, also known online as the 'Source of All Evil' by many netizens.

Not long ago, our team developed a new type of insecticide gel bait that is much more effective against cockroaches than existing insecticides.

Of course.

Compared to my introduction, the over one million cockroach carcasses in the square seem more convincing."

Another wave of good-natured laughter arose from the media corner.

After the laughter died down, Xu Yun continued:

"With the help of the school, we have established a biomedical company called Huadun Biotech, and the relevant patent and production qualification approvals are in the final stages.

If all goes well.

We will have a small number of products for trial sale within two weeks, and should officially launch sales within a month."

A female reporter from Wannan Tuantuan nodded and asked:

"So Dr. Xu, what about the price of the insecticide?"

"That still needs to be discussed; after all, our product's production qualification hasn't fully been approved yet."

"Dr. Xu, is this gel bait harmful to humans?"

"Of course not, it mainly targets nAChR and insect-specific sodium ion channels, so it wouldn't be a problem for humans, let alone cats, dogs, or even mice—unless you swallow about a pound or two in one go....."

"Dr. Xu..."

Seeing Xu Yun talk confidently at the press conference, Zhang Rui and Tian Liangwei exchanged a glance:

Although Xu Yun's performance on stage wasn't exaggerated enough to make one stroke their beard and praise 'this child will surely achieve great things', his present composure certainly marks him as having a big heart.

After all, not everyone can remain so composed in this situation.

And having a big heart is often a key foundation for someone to achieve great accomplishments.

Twenty minutes later.

Xu Yun finished his introduction and stepped down amidst applause.

At this moment, on the trending list, the popularity of Chen Shanshan, the Cockroach Lady, was soaring.

As for Xu Yun, not to mention ranking on the hot search, he didn't even have a topic marked with a hashtag.

But in some casually posted Weibo by individual users, the names Dr. Xu or Xu Yun were occasionally mentioned.

In a sense, this marked Xu Yun's first emergence into public view.

Although the feedback is currently sparse, at least many people now know that there is such a person at USTC.

If there's another opportunity in the future, these dormant yet unforgettable fragments of memory might explode with a force even stronger than Chen Shanshan's....

After Zhang Rui resumed control of the press conference, he routinely answered some questions.

An hour later.

The press conference officially ended.

As per tradition, after such a 'grand event', a celebration banquet is usually held, where school leaders will commend the achievement.

However, Xu Yun used the excuse of having diarrhea to hastily return to his little den.

Back in his room.

He quickly drew the curtains, locked the door, and re-entered that mysterious space.

At this moment.

The value on the door representing Dungeon 1665 showed only slight changes, from '3/100', it had increased to '10/100'.

But next to it, the door was displaying.....

"100/100".

...

Note:

The next dungeon remains unguessed, what a pity....

Last two days, if you want to guess, make your move soon, only comments will count.

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

## **Chapter 108 99: Unlocking a New Dungeon!**

[ 1,245 words ]

Within the mysterious space.

Staring at the second door in front of him, already filled with knowledge points, Xu Yun's expression was slightly solemn.

According to the situation of the 1665 dungeon earlier, theoretically, he just needed to lightly push it to easily step through the door.

What kind of new world would it be?

Still the 17th century?

Or the 12th century? The 6th century?

Or even...

Before the Common Era?

Though he was excited, Xu Yun did not push the door unprepared like a rookie this time.

He first exited the space and returned to reality.

Then he went to his desk and picked up a paper and pen.

He jotted down two lines of words in no particular order.

The content of the first line was:

Knowledge points, Door 1, Door 2,

The second line was:

Extermination live broadcast, thesis, company establishment, product production.

This was a habit Xu Yun developed from writing online novels in his past life. Unlike many writers who use a computer to draft, Xu Yun always organized his thoughts with pen and paper before writing.

Of course.

Due to his slow handwriting, he mostly knew the plot just two hours before the readers did.

Focusing back on the original place,

The two lines written by Xu Yun, the former referred to the most direct changes of the two doors within the halo, while the latter were potential changing factors.

As for the reason he chose to return to reality, it was very simple—aside from inside the dungeon, the flow of time inside the space was consistent with reality.

Which means that as much time passed in the space, the same amount of time passed in reality.

Therefore, instead of staying in such a claustrophobic space, it was more comfortable to return to reality.

Then Xu Yun thought for a moment and first excluded the four words "company establishment".

After all, the initial time of company establishment could be traced back to a few days ago. At that time, Xu Yun did not receive any feedback of increased knowledge points, so this possibility could be temporarily ruled out.

As for the remaining thesis and product production, to be honest, the probability wasn't very high.

It's not that these two wouldn't affect the generation of knowledge points, but because both the thesis and the bait products haven't yet appeared in the public eye.

Yesterday, Morton already replied with the external review feedback of the thesis to NAR, and no page fee was needed for the solicitation thesis, so the thesis was already at the final publishing stage.

However, even with that, it would still be absolutely impossible for the thesis to be formally published within a week or two.

The bait products were similar.

As Xu Yun mentioned at the press conference, even being available for sale within a month would be considered fast.

Therefore, whether the thesis, product, and derived income can affect the knowledge points, needs further observation over time.

So the main reason for the knowledge points change is most likely—

The extermination live broadcast!

Or more specifically, the social influence of the event!

The more people it affects, the greater the number of knowledge points.

And this hypothesis coincides perfectly with the change in knowledge points when Anta appeared in the Little Niu portrait.

Thinking of this, Xu Yun couldn't help but relax slightly.

Although the origin of the mysterious halo was still unknown, at least part of the mechanism of knowledge points was grasped, preventing him from being completely in the dark.

Then he circled the words "Door 1" and "Door 2", muttering:

"Strange... Why did the Little Niu dungeon only increase by 7 knowledge points, while the second door's knowledge points increased by a whole hundred?"

After a while, Xu Yun suddenly thought of something, then wrote down two words:

Attributes, Overflow.

The former means the knowledge point attributes of the two doors were different and couldn't be compared in the same way.

Just like currency denominations, the knowledge points from the second opening of the 1665 dungeon belong to 'ten-dollar', while the second door is 'one-dollar'.

Due to the different conversion rates, that's why the deviation between the two was so outrageous.

As for the overflow guess, it was...

"The extermination live broadcast gave a total of 107 points, filled the unopened second door first, and the remaining seven points overflowed back to the first door. It's a matter of selective priority, unrelated to the point attributes."

Looking at the two possibilities in front of him, Xu Yun's expression was somewhat complicated.

If the infusing mechanism of knowledge points was overflow type, it would be manageable, requiring just 90 normal knowledge points to reopen the Little Niu dungeon.

But if it's the first possibility...

Then trying to meet Little Niu again would be extremely difficult.

Then he gently shook his head, putting these matters behind him.

Regardless of whether the knowledge points overflow or have some transformation mechanism, it was evidently impossible to meet Little Niu at the moment. Therefore, what really needed consideration now was...

The opening of the second door!

With the experience from the first time, Xu Yun naturally wouldn't rashly push the door this time.

He first pulled open the drawer and took out a small wooden box from it.

The wooden box had a sliding opening method, without modern industrial components.

Following that, Xu Yun slid the lid of the wooden box revealing the objects inside:

They were a dozen pieces of scattered gold and silver, the largest about the size of a fingernail, extremely irregular in shape.

These gold and silver originally were bullion and silver bars Xu Yun bought from Taobao, totaling over a thousand yuan. After obtaining them, he used a high-temperature furnace in the physics lab to remelt them into irregular shapes.

These small pieces of gold and silver were one of Xu Yun's preparations.

There's a saying that money isn't everything, but without money, nothing is possible.

And throughout the long history of human civilization, apart from the very early barbarian tribe era, in other periods, whether in China or abroad, gold and silver could be considered hard currencies in money.

With these pieces of gold and silver in hand, at least he wouldn't face the embarrassment of freeloading food in Little Niu's home again.

In addition to this.

Xu Yun also prepared a simple fire-tempered knife, a ceramic bottle similar to a quick acting heart-relief pill, a wig, and a package of compressed biscuits wrapped in burlap.

All these items used basic industrial techniques, so theoretically, as long as he didn't cross over to the Bronze Age, these things wouldn't get forcibly stuck in reality like a cellphone would.

Carefully, he packed these items one by one, changing into a base layer quick-drying shirt, with a down jacket as the outerwear—based on the 1665 dungeon, the halo seemed not to shield clothing that much.

Otherwise, the plastic tips on zippers and shoelaces should normally be left in reality.

After preparing these steps, Xu Yun adjusted the surveillance camera bought online into operation mode.

Although time inside and outside the dungeon wouldn't change, there was one thing he always wanted to find out:

Whether he transmigrated physically or in spirit?

Of course.

Perhaps the frame rate of the camera couldn't capture the changes in an instant, but since it cost nothing to try, why not?

Everything prepared.

Xu Yun took a deep breath before returning to the space, heading straight to the second door.

He pushed heavily, stepping through the door.

At the same time.

On the distant British Peninsula.

Around 1960, the Royal Society of England built a celebrity monument in the London suburbs to commemorate notable scientists in British history.

At this moment.

Whether it was due to the softness of the ground or not, the monument representing Robert Hooke suddenly trembled slightly...

As if it had once again been NTR'd...

Hmm?

Why say "once again"?

.....

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

## **Chapter 109 100 This Time It Didn't Fall From the Sky**

[ 1,759 words ]

On a certain year, month, and day.

Bianjing City was tranquil and peaceful.

The crescent moon on the eastern horizon illuminated the vermilion doors of palaces and the dilapidated inns.

Some mumbled in gentle dreams.

Some stayed awake all night.

Cold moonlight sprinkled over the courtyard of Wutai, where a hunched figure with hands behind, looked up at the starry sky.

Eighty years in a lifetime, at this moment, countless memories gently flashed through his mind.

.....

Creak, creak—

A street vendor pushed a wheelbarrow, huffing and creaking as he walked forward.

He woke up half an hour earlier than yesterday, firmly believing he could get a good spot this time.

As soon as he reached the Ministry of Rites entrance, the vendor was surrounded by a bustling crowd.

"Do you have grilled meat in bread?"

"Do you have multi-grain pancakes?"

"Rice noodles, intestinal noodles, hot and sour noodles?"

"Pulled noodles, knife-cut noodles, hot dried noodles?"

"Do you have Sha County-style noodles?"

"You fool! Can't you see the sign for spicy soup?"

The relatively young vendor could not understand the diverse accents, but it did not hinder his skillful performance.

Facing the diners' angry looks, he awkwardly smiled and said:

"There's nothing else, just skilled hands."

The crowd, stomachs filled, squatted at the entrance, with lively chatter resonating.

The vendor lowered his head, cleaning tables and bowls, occasionally looking at them thoughtfully, a hint of decline passing through his eyes.

Years ago, I too was once this passionate and ambitious.

As the saying goes.

Whenever the sun rises, some are happy, and some are troubled.

The gates of the Ministry of Rites slowly opened, an official holding a list walked towards the bulletin board.

The crowd followed like magnets, as if drawn by an unseen force.

They had studied diligently for decades, honing their writing skills in their prime, their talents sparking between paper and pen, all to seek a name on the golden list one day.

Today, was the day the court released the examination results.

Among this group of scholars, there was a middle-aged man who, after reading the list, wordlessly squeezed out from the crowd.

The middle-aged man sat at the vendor's stall to rest, quietly observing the humanity before him, while the vendor did not rush him.

The national exam is like an army crossing a single-log bridge; any slack and you'll become a supporting role.

Only by making it into the officials' selection can one advance from laborious work to intellectual effort.

This person successfully advanced, while many other examinees put down their books to become the new generation of vendors.

Four years later.

He was born.

His father—the middle-aged man, relying on his writing skills, had climbed from a local 推官 to an Assistant Minister of the Ministry of Rites.

As his years of service increased, so did his income, and his house was filled with books.

But he seemed only to care about eating and growing, showing no signs of extraordinary talent.

Spending the whole day amidst piles of books, he could not manage to write a perfect essay.

Nor did he recite Tang poems at three, learn English at six, or excel in math competitions at nine...

He obviously couldn't keep up with the prodigies, and could only slog through word by word.

But perhaps diligence can compensate for clumsiness.

Any knowledge etched into his mind might be quickly mastered once comprehended.

His father patiently taught him progressively, and he persisted in reading three to five pages more daily.

Eighteen years passed in the blink of an eye, Bianjing City remained as splendid as ever.

That day.

He could not reach the Ministry of Rites entrance, blocked by the bustling crowd.

Seeing that the bulletin board had not yet been posted, he decided to find a small stall to eat first.

In the distance, an old man appeared to be in his fifties, selling spicy soup with a sign on his wheelbarrow reading "Century-Old Shop."

But before he got closer, he saw two scholars at the scene, fuming while another stood by watching.

Scholar A: "Why are your hands shaking like that?"

Old Man: "There's nothing else, just skilled hands."

Scholar B: "Skilled hands, my ass, there's only clear soup in the bowl!"

Old Man: "Hey, shame on you as a scholar, such offensive words."

Scholar B: "Offensive? Look at what you've done! Curse you, give me a refund!"

Scholar A: "Forget it, he's just an old man, life isn't easy for him."

Scholar B: "ㄟ(っ^\_)ㄏ, if I pass, I'll certainly deal with such shady merchants!"

The old man weighed the copper plate in his hand, quietly poured the spicy soup back into the bucket when no one was looking.

He: "..."

Just then.

A sound announced the list was posted.

He was swept towards the bulletin board by the crowd, finding his name on the list.

He looked repeatedly until he almost didn't recognize the two characters, finally managed to squeeze out of the crowd.

He sat at a vendor's stall to rest, quietly observing the scene before him.

While the two scholars who had fussed over spicy soup were nearby, bidding each other farewell.

"Congratulations, Brother Wang, I will recommend you to our teacher."

"This... Brother Zeng hasn't even passed the exam, yet you want to speak for me..."

"Ah, there's no need for more words between us. My teacher, Ouyang Xiu, will surely support you!"

"Then I thank you here, I wonder what plans Brother Zeng has?"

"I'll go back to the countryside and buy a few piglets to raise."

"No one but the teacher understands me..."

That year, he was 23, unaware that the scholar named Wang standing next to him would nearly destroy him in the future.

Three years later.

He was assigned as County Magistrate of Jiangning, with remarkable political achievements.

At that time, after Wang Tripod criticized Fan Zhongyan's new policy, he wrote in the evaluation column for him:

"Beyond my reach."

Two years later.

He was promoted and became Nanjing 推官.

A few years later, his father—the middle-aged man from before—passed away.

After the mourning period, he went back to the Capital City and was assigned to the Trial Hall for proofreading.

He became a librarian who managed mysterious powers, freely voyaging in the ocean of knowledge at any time.

He roamed for nine years, as if he might soon not be able to put food on the table at home, Records of the Grand Historian 'spent nine years under the library, supporting his

grandmother and mother, and raising dozens of relatives, marrying off daughters-in-law as needed. His wife's food and clothing were often lacking, yet he handled it with ease.'

But as the saying goes.

Enough ordinary events when stacked together might give birth to something extraordinary.

After his father's passing, he didn't abandon his childhood habit, insisting on reading a few more pages each day.

Stacking over three thousand days and nights, he almost became a walking encyclopedia.

When Emperor Renzong wanted to revise the new pharmacopoeia, he spoke without notes.

Simply sorted the materials in his mind, and was immediately appointed as the chief engineer of the project.

Later, he led a team that took 3 years to compile the 21-volume "Illustrated Materia Medica."

This great work, surpassing the realm of medicine, gathered the natural wonders of the Eastern Land.

He later served as an envoy to Liao Kingdom, and was reassigned to various places, only to be called back to the Capital City to edit history many years later.

After twenty-five years, as he walked into the Royal Library once more, the young literature enthusiast had grayed hair, while the heavy tomes remained unchanged in appearance.

He compiled the insights from two trips and organized "Lu Wei's Record," with Emperor Shen Zong urging him for updates as he read, always staying at the top supporter rank, voting for the Monthly Pass every day.

But two years later, a sudden change occurred.

Imperial Doctor Chen Shiru's mother died, with rumors stating she was murdered by her son and daughter-in-law.

However, due to a lack of solid evidence, he did not convict Old Chen and his wife.

Nonetheless, under the influence of interested parties, the story became more and more bizarre, even alarming the Emperor in the deep palace.

Following significant articles from reformist leaders like Cai Que, he was imprisoned in the Imperial Censorate.

His cellmate next door was Su Shi, who upon first meeting him cheerfully asked:

"Hey, buddy, do you know what it means to have banned words blocked?"

Later, after a concerted rescue effort by the cultural community, Su Shi was demoted to Vice Military Commissioner of Huang Prefecture.

Disheartened, Su Shi composed poems to braised pork, and his "Ode to Pork" became more famous than his buddy.

He was sent to Cangzhou to become a Prefect and was called back to the Capital City three years later to take office.

This man, who had led a tumultuous life for half a century, finally witnessed the flourishing of the essence of life.

He devoted himself to his different roles, steadily rising in rank while achieving accomplishments.

In the same year, Emperor Shen Zong had his eleventh son.

Emperor Shen Zong held the chubby white baby and said sadly:

"Ji Er, you only have two brothers who are still alive..."

Zhao Ji, who would later become Emperor Huizong.

Later, he gathered Han Gonglian to build the Water Transporting Celestial Observation Platform. It took a hundred craftsmen seven years to flawlessly integrate disciplines such as calendar calculations, mechanics, and fluid dynamics, creating the world's first automated astronomical instrument.

Looking up at the three-story-high observation platform, the pointer's movements synchronized with the stars and moon.

Every hour, different puppets came out to strike gongs and drums.

Fearing that humanities students wouldn't understand, he wrote an instruction manual "New Astronomical Instrument Manual," which included the structure of over 150 parts and full diagrams of the mechanical transmissions.

Later, the research team also constructed the Celestial Sphere, with water flow alternating 14 star maps in cycles.

1,464 stars sparkled overhead, as if placing people in the ancient cosmos.

Now, years have passed again, and from Scholar A to Scholar B, nearly all his peers have died.

He faintly recalls the old man who sold spicy soup; one wonders if there are any successors to his ladle skills?

Over the years, the succession of partisan struggles hasn't stopped, with various forces continuing to exploit opportunities to attack.

Yet he chose no faction, gradually becoming a lonely high-ranking figure.

Three years ago.

He laid everything down and retired.

No longer burdened by court intrigues and heavy duties, he didn't need to guess the minds of leaders or flatter them.

He quietly gazed at the night sky alone, hearing the footsteps of time's passing.

The vast and profound infinite universe could soothe the unspeakable dissatisfaction of this life.

Feet on the earth, gazing at the stars.

He deeply understood that there was little time left, uncertain how people would judge him after a thousand years.

And just as the old man gazed up at the stars, his old servant suddenly rushed from the back hall:

"Master, it's not good, there's a water ghost in the well in the backyard!!!"

....

Note:

Please ask for a Monthly Pass.....

Share to your friends

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

## Chapter 110 101: True\*Dog-Blood Drama

[ 1,720 words ]

The timeline goes back fifteen minutes.

Plop——

A crisp splash is heard, as a figure suddenly drops from the void.

A moment later.

"Puh ha——"

Xu Yun lifts his head from the water, spitting out a mouthful of clear, cold water.

After several breaths, he starts to assess the situation around him.

Alright, not much to take in—he's currently at the bottom of a well over one meter wide, thirteen or fourteen meters deep, the exit visible with a hint of light overhead.

The original depth of the well water was about eighty centimeters. After someone falls in, the height has risen by about five centimeters, just above Xu Yun's waist. There's a wooden bucket hanging near his neck.

Feeling the dampness below, Xu Yun briefly checks his body, slightly furrowing his brow:

The phone still didn't travel with him, so there's no worry about water damage.

But the compressed biscuits he's carrying are soaked, showing signs of swelling, likely unsuitable for long-term storage.

As for the essential gold and silver coins, they should be okay; they can still be used despite getting wet, so the situation isn't too terrible.

The strange thing is, even though he's regained consciousness, the Halo's task prompt hasn't appeared.

Could it be like with Little Niu before, needing a surge of knowledge to activate the task?

As Xu Yun ponders, a sliding sensation suddenly comes from his ankle.

Xu Yun's expression shifts, and he quickly places several items into the dry wooden bucket.

Then he bends over and reaches into the water.

A minute later.

Xu Yun stands up again, now with...

A fish.

Fishermen never empty-handed.jpg.

He then raises the fish, studying it intently.

Under the moonlight shining into the well, he sees a gold-yellow carp, nearly 30 centimeters long.

Raising fish in a well is a common custom.

First, most wells are open-air, so when there's wind or rain, they collect more debris.

Hence, algae or small insects easily grow, polluting the water source.

Adding some small fish can help; the fish eat the algae and bugs, solving the pollution issue.

Second, it's for poison prevention, something often remembered by rural kids.

Well poisoning has been a common tactic since ancient times.

Thus, what surprises Xu Yun isn't the fish, but its species.....

As a biology PhD, Xu Yun isn't like a walking identification device, but distinguishing notable species isn't hard.

"Flat sides, round belly, notably two pairs of barbels..."

As Xu Yun observes, he increasingly expresses surprise:

"This is..... a Yellow River Carp?"

Yellow River Carp, belonging to the carp family of fish.

Full-figured, moist and tender flesh, nutritious ah... cough, wrong, wrong.

Yellow River Carp, as its name suggests, is a special carp species native to the Yellow River!

Right!

Beyond the Yellow River Basin, you won't find this carp anywhere else.

Even later Asian carp invasions into Europe and America, Yellow River Carp still exists in a relatively small native range.

At most, via farming, they might reach some distant provinces.

So clearly...

This dungeon descends into not abroad, but.....

Home soil!

Thinking of this, Xu Yun's eyes brighten:

"Given Halo's trait.... Is it Song Yingxing this time? Shen Kuo? Sun Simiao? Or a modern scientist?"

Then he places the carp back into the water, took out a cloth bag with two wigs from the bucket.

One is a Western-style black curl, the other is an ancient bun bought for 54 yuan from Taobao.

No matter which era or place traveled, clothes can somewhat be explained away as odd attire, but hairstyles are distinct.

Due to the fall into water, the bun is mostly soaked, wet and not very pretty.

However, Xu Yun doesn't mind much, simply wringing it a bit before putting it on.

After finishing this, he tries pulling the rope of the wooden bucket.

Hmm, a bit slack.

Students who've fallen into a well know.

To climb out heedless of rope usage, first check your injuries, then the diameter of the well.

If the well bottom is about one meter across, it's simple.

One can brace against the wall, pushing up with legs, using alternating elbows for support, conserving energy.

However, unfortunately, the well Xu Yun fell in is a whopping meter and a half wide.

He's not that long-legged shadow from TikTok, thus climbing out alone is clearly difficult.

Frustrated, Xu Yun opts for another way.

He clears his throat and shouts towards the opening:

"Anyone there? Help me out!!!!"

This well is located at the mansion's southern rear, commonly known as the South Wing.

Generally speaking.

The main mansion area is usually the North Wing, where the masters live.

East and West wings vary, some serve as guest rooms, others for sons and daughters.

While the South Wing mostly houses servants, basically always staffed with aides working shifts or exerting themselves.

Like now, the elder steward is allocating tomorrow's duties near the South Wing.

"Xiaosan, collect one hundred and twenty wen, go to Hongyu Records for pastries tomorrow morning, avoid sweet tofu pudding."

"Yongzhu, take three hundred wen tomorrow, acquire some lean meat at Butcher Huang's, no fat at all, finely chop into mince."

"Ah Ping..."

Just as the elder steward was detailing the morrow's plans, faint shouts reached his ears.

"Anyone there....."

The elder steward initially thought it a slight hallucination due to aging, thus paying no mind.

But gradually.

The sound in the dark night became clearer and even carried an echo.

The Old Chief Steward couldn't help but frown and asked the people in front of him:

"Did any of you hear anything?"

The servants quickly nodded their heads:

"Heard it, heard it!"

The middle-aged man named Yongzhu glanced around and suddenly fixed his gaze in a direction, pointing there, he said:

"Old Chief Steward, the sound seems to come from the well behind the wall?"

Then he suddenly thought of something, and his face turned pale:

"Howling at midnight, is it a ghost?"

Yongzhu's words made the atmosphere on the scene a bit more oppressive.

During the Song Dynasty, ghost worship was prevalent. Even among bureaucrats, many officials believed in the supernatural.

A very representative figure was Bao Qingtian, who judged the living by day and the dead by night. The image of many female ghosts in later generations also originated from the Song Dynasty.

Therefore, among the common people, many matters would uncontrollably be connected to ghosts and gods.

"Everyone, calm yourselves!"

Old Chief Steward, who had been a steward in the army, was respected in the household even after his lord retired, so he immediately shouted:

"Our yang energy is strong, the Patriarch is righteous, and Xiaosan and Ah Ping are still virgins. Even if there are evil spirits, there is nothing to fear. Why cause such a fuss?"

Old Qi, go to the front yard to find the master. If he hasn't undressed yet, invite him to come here.

The rest of you, grab your weapons and come with me to investigate. Perhaps it's just some hooligans playing around at night."

With that, he took up a broadsword first and lit a torch.

Leading the group towards the mouth of the well behind the wall.

The well was only thirty to fifty steps away from where they had previously been, so with each step, the sound in their ears grew louder.

"Help....."

"Is anyone there....."

A moment later.

The Old Chief Steward and others arrived at the edge of the well.

Then Old Chief Steward, holding a broadsword in one hand and a torch in the other, stood at the well's edge and shouted down:

"Is anyone down there?"

Seeing the torch appear, Xu Yun in the well suddenly felt reassured.

Although the halo once again translated the language of the people above into something he could understand.

But Xu Yun was sure this language was not the English that Little Niu had mentioned—it was authentic ancient official language.

As for which dynasty's official language it was, he didn't know, but he could vaguely hear a resemblance to a Zhongzhou accent.

This was somewhat good news because at least Man Qing's capital was not in Zhongzhou, avoiding some bad situations.

Then he cupped his hands into a trumpet shape and shouted upwards:

"Respected elder above, I am a traveler who accidentally fell into the well pit. I am truly sorry for the disturbance at night, and hope for assistance in saving me!"

The Old Chief Steward at the well's edge, hearing this, couldn't help but glance at the over-a-yard-high courtyard wall around him, his expression somewhat odd:

What kind of traveler could walk and leap over a yard-high courtyard wall to end up in someone else's manor?

Could it be this person thought he fell in an isolated rural village?

Of course.

Since ancient times, the crafty tongues of demons and ghosts couldn't be believed by one's side of the story alone.

Then he thought about it, called over two servants, whispered a few instructions, and the two servants left in response.

A moment later.

One of the servants returned with a thick rope, and the Old Chief Steward instructed Yongzhu and others to secure one end, then called down into the well:

"Hey, man! We'll talk about other matters later. Let's pull you up from the well first. What do you say?"

Soon, Xu Yun's response came from the well:

"Thank you, elder!"

The Old Chief Steward stepped back a few steps and signaled to throw the rope into the well.

A few moments later.

The rope suddenly tightened externally, indicating someone below had grasped it and was exerting force.

With the help of the fixed rope, Xu Yun climbed up the well wall relatively easily, as if rock climbing.

As soon as his head emerged from the well, everyone around—including the Old Chief Steward—took a big step back.

As a modern man, Xu Yun's complexion appeared fair by ancient standards, not to mention he had been in the water for a while.

At this moment.

Under the torchlight at night, his face appeared ghostly pale, devoid of any color.

This scene, coupled with his black down jacket, was somewhat shocking to the Old Chief Steward and others.

Seeing this, a faint bitter smile appeared on Xu Yun's face.

He then cupped his hands and was about to speak:

"Esteemed elder, I am..."

However, before he could finish speaking, he felt a liquid pour over his back.

This liquid was very viscous and carried a slightly bloody smell.

Xu Yun instinctively wiped with his hand, finding it smeared with bright red.

At the same time, a voice of surprise came from behind him:

"Huh? Even ten-year-old black dog blood from the ice cellar didn't work? He really is human?"

Xu Yun, bewildered, turned his head and found a boy standing behind him, holding a red wooden basin.

A real 'dog-blood' drama.....

Meanwhile.

Seeing that the black dog blood didn't work, the Old Chief Steward instead gained courage.

He shouted loudly, raising the broadsword:

"Men, seize this thief for me!"

Whoosh——

Seconds later.

Seeing the sticks poised at his neck, Xu Yun sighed slightly:

Why is there always a hellish difficulty at the beginning.....

.....

Share to your friends

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

**Chapter 111 111: Zhang 102: This damn Halo.....**

[ 1,374 words ]

After confirming Xu Yun was human and not a ghost, the actions of Old Chief Steward and the others became considerably bolder.

However, given that their master was a scholar, and the current national focus was on literature over military, Old Chief Steward and a group of servants, though displeased with Xu Yun's disturbance of their peace, only used sticks to hold his neck.

There were neither restraining ropes nor any pushing and shouting.

Just like that.

The group noisily proceeded to the central courtyard, coincidentally encountering an elder heading towards the backyard with the servant.

Old Chief Steward quickly stopped and led the servants in a salute:

"Good day, sir."

The elder nodded slightly in acknowledgment, first glancing at Xu Yun, then asking Old Chief Steward with confusion:

"In the First Year, who is this person...?"

Old Chief Steward turned to Xu Yun, snorted coldly:

"Sir, this is the Water Ghost who howls from the well in the South Wing at midnight, but in reality, it's just a burglar who sneaked into the manor and accidentally fell into the water!"

"A burglar?"

The elder took the torch from the servant beside him and examined Xu Yun under the firelight.

After a moment, he frowned slightly.

Although this person's clothing was somewhat peculiar, judging by his complexion, he hardly seemed like a gentleman of the night, right?

It's essential to know.

Although this era was hailed as the wealthiest in history, even in Bianjing City, few could boast skin as delicate as this man's.

Notably, some known gentlemen of the night, such as Wen Tong and Liu Zhong, on wanted posters, were all skinny and sinister-looking characters.

Not to mention that although his attire was bizarre, the boots on his feet were quite remarkable, with such fine workmanship that they might fetch seven or eight silver pieces if pawned.

The elder pondered for a moment, then addressed Xu Yun:

"I do not know, noble sir, your esteemed surname? Why intrude upon my manor in the dead of night?"

Xu Yun instinctively opened his mouth to speak but found himself unable to formulate a response:

The elder's words clearly hinted at something deeper, but how could he explain his behavior?

Originally, Xu Yun thought the well he fell into wasn't one of those small private ones but a communal well, with a diameter of one and a half meters, so the explanation of accidentally falling into it at midnight could just about suffice.

However, the walls of this courtyard were high and imposing, rendering his previous explanation useless.

The critical problem was that he had no information about the era or goals; he couldn't even make an educated guess.

Thus, Xu Yun's lips moved a few times, but ultimately, he chose to remain silent.

To the elder, Xu Yun's hesitance and eventual silence conveyed a different meaning entirely.

This man, later known as the 'Eastern Da Vinci' and a super genius, although now elderly, had lost none of his intellectual prowess.

His mind swiftly scanned through a variety of experiences, suddenly recalling something:

If memory served, there was some trouble at the largest pleasure boat in Bianjing City last night, with rumors of a few male entertainers escaping...

He then turned to Old Chief Steward, asking:

"In the First Year, does this man possess a badge?"

"Nothing was found."

"Light Disc Guide?"

"Nor was there."

"What does he have?"

Old Chief Steward accepted a box and two bundles from someone nearby:

"Just these three items."

"Open them for inspection."

Old Chief Steward placed the three items on the table in the courtyard and opened them one by one to reveal their contents.

The elder stepped forward slowly, examining each item:

Bits of gold and silver — hmm, trinkets hastily gathered during the escape.

Something resembling dough — hmm, pastries intended to be consumed in a rush when leaving the pleasure boat, inadvertently soaked with water.

A small knife wrapped in cloth — a knife less than a foot long, likely a tool for peeling apples in the Musician's Room?

As for the last headdress...

Right, perhaps a headdress favored by a certain patron?

The elder felt as though he had become a reincarnation of Bao Longtu, upholding the honorable tradition of the Prefect of Kaifeng, accurately deducing the man's identity with precision.

No wonder he lacked a badge;

No wonder his clothing was strange;

No wonder he remained silent;

Even more so, no wonder he, in panic and despair, chose in the dead of night to enter my manor but avoided the main building and both East and West Wings, opting instead for the South Wing, a servant's quarters...

All of this, because the person is a...

Male entertainer!

At this thought, the elder couldn't help but show a moment of pity.

To later generations, the term "male entertainer" might conjure images of Qing Dynasty's 'husband's house,' referring to Dan roles in Peking Opera.

But in fact.

Throughout the long history of feudal dynasties in this land, every dynasty had the profession of male entertainers.

Male entertainers flourished during the Wei, Jin, and Southern and Northern Dynasties. The Tang Dynasty saw a decline, but in the Song Dynasty, the trend of male beauty revived.

Due to the abundance of publicly available male beauties, the authorities had to intervene:

"Men who act as beauties shall be caned a hundred strokes, and those who report it will be rewarded fifty strings of cash."

However, just as there are still many industries today, laws could not entirely restrict the appearance of male entertainers.

On the contrary, the legal restrictions nurtured the male entertainment industry in the shadows, extending its reach to quite a significant range.

Unlike female prostitutes, if a woman of the profession had active or passive options to leave, such as a patron redeeming them or aging out, the fate of male entertainers was undoubtedly much bleaker.

Because of the dark aspect of the industry, most male entertainers lacked family registration badges.

Once the master household felt a male entertainer could no longer bring enough profit, they would contact the authorities to arrange for the entertainer to become a scapegoat.

If it involved incarceration, it was one thing, but if they became a substitute for a wealthy death row inmate, the outcome for the entertainer would be very grim.

When the elder was in office, he had strongly urged the Court to enforce laws that prohibited the persecution of male entertainers.

Unfortunately, the forces involved were too vast, and the elder, incapable of combating them all, had no choice but to give up.

In doing so, he performed what was, in his lifetime, his only 'Gate Valve' act:

Any student or friend known to favor male entertainers, the former was expelled from his academic circle, and the latter was severed from all ties!

This pondering brought the elder to a place of empathy for Xu Yun's situation.

After some brief consideration, he told Old Chief Steward:

"In the First Year, take this man to the South Wing, clear a room to house him temporarily.

Provide him with some food daily. After meals, he may walk around the manor briefly, but guards must accompany him."

"As you wish!"

Old Chief Steward nodded, though a hint of hesitation appeared on his face:

"But sir..."

The elder lifted his eyes and glanced at him, saying:

"In the First Year, you have been by my side for decades. Speak freely if you have concerns."

Only then did Old Chief Steward continue:

"But sir, are we to leave this person alone like this? Shouldn't we report this to the authorities?"

The elder shook his head, confident in his judgment:

"This person is merely a pitiful soul. Look at his build; under close supervision, what harm can he really do?"

We will return to Jingkou in a month; providing for him is just rice and vegetables.

If nothing unusual occurs, after returning home, we could employ him as a tenant farmer to live out his days as a farmer, which surely beats losing his life..."

Seeing that his master had made up his mind, Old Chief Steward refrained from further remarks and took his leave with a bow.

He collected Xu Yun's belongings and escorted him back to the South Wing.

Two quarters of an hour later.

A room of seven to eight square meters was cleared for Xu Yun, who cleansed the black dog blood off himself and changed into a hemp-blue robe.

Old Chief Steward dispatched someone to bring a basin of hot soup, then exited the room and locked the door.

Inside the room.

Xu Yun soaked his feet, looking at the two bells tied around his ankle by Old Chief Steward, and sighed softly:

"So, which dynasty is this, after all?"

...

...

Share to your friends

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

## Chapter 112 103 It was him

[ 1,456 words ]

In his previous life, Xu Yun, due to the nature of his freelance profession, had a relatively flexible schedule every day, so over time, he developed a sort of underworld biological clock.

It meant sleeping at three or four in the morning and waking up at one or two in the afternoon.

Such a routine over the years led Xu Yun to develop reflux esophagitis, causing stomach acid to burn the esophagus.

However, after being reborn, he deliberately adjusted his sleep habits. Although his scientific research work inevitably involved staying up late, overall, his sleep schedule became more in tune with the living world's pattern.

Hence, when the urging voice came from outside at three quarters past Mao hour, Xu Yun quickly woke up.

"Hey, inside the room, get up early!"

"...Oh, coming!"

Xu Yun rubbed his sleepy eyes, responded simply, and got up to dress.

Yesterday, the old steward gave him a set of standard servant attire, extremely simple and plain, without any discernible historical style.

As for the clothes worn by that elderly patriarch, they seemed rather nice, possibly made of silk, which a professional might easily distinguish the dynasty from some of its patterns.

But don't forget.

Xu Yun is a science student.

If you ask him to recite the CVs of guys like Little Niu or Dirac and those bosses, there's no problem, he could even recite them backwards.

But trying to get him to analyze the specific era from some clothing details, that's a bit much.

After all, every field has its specialty, and human capability is limited.

After dressing.

Xu Yun opened the door and walked into the courtyard.

The room he occupied was in the middle of the South Wing, with a firewood room next to it, and further down were the servants' dorms.

In the courtyard, a large millstone was slowly grinding, crushing the big rice.

In addition, several servants were in the courtyard, moving and chopping firewood, looking very diligent.

Seeing Xu Yun come out, one of the servant men immediately stepped forward and handed over a set of items:

"Hey, your washing kit, there's a channel in the corner, quickly get water and wash yourself, you have to work later this morning."

Xu Yun instinctively took the set of items and found it was a wooden cup and a soft small wooden brush.

Upon seeing this, Xu Yun was deep in thought.

Although he lacked knowledge about clothing, he was quite familiar with toothbrush history:

The term toothbrush officially appeared in the Yuan Dynasty; Guo Yu's poem said: "Southern land toothbrush sent on head day, removing dirt and cleaning, worth one gold."

But in the Song Dynasty before the Yuan Dynasty, there was already a habit of brushing, and the toothbrush was also called brushing.

For example, the Southern Song loyalist Zhou Mi recorded in his work "Dream Liang Recording":

"At Lion Alley entrance there's Ling's brushing shop, at Gold Alley entrance there's Fu's brushing shop."

Going further back through the Sui and Tang Dynasties, although there were records of brushing teeth, people mainly chewed willow twigs.

Perhaps some created toothbrushes early for various reasons, but it couldn't have been widespread enough that servants could use them.

"Yuan Dynasty's clothing obviously isn't this style, Ming Dynasty's toothbrush had long handles, as for Qing... just looking at the hairstyle, it's impossible. So, that means... I probably arrived in the Song Dynasty?"

Thinking of this, Xu Yun's eyes couldn't help but brighten:

"Scientists of the Song Dynasty... Shen Kuo? Su Song? Qin Jiushao? Or perhaps... Yang Hui?"

Just as Xu Yun's thoughts were wandering, the man's impatient voice rang again:

"Hey, what are you doing standing there dumbly? Do we need to carry you over those few steps?"

Xu Yun then regained his composure and quickly apologized to the man:

"Sorry, sorry, got lost in thought."

Saying this, he took the dental kit and walked to the channel, scooping some water from a wooden bucket and began to brush his teeth.

Actually, Xu Yun didn't understand why the owner of the courtyard didn't report him to the government but arranged such a residence for him.

After all, logically, he totally counts as trespassing, right?

Yesterday, the elderly man's words seemed to have a hint of regret, as if he was imagining something peculiar.

But for Xu Yun, this was considered a good thing.

After all, going to jail is troublesome in any dynasty, though it feels as if people's gazes upon him are somewhat strange...

How should I put it.

It's like in his past life when he went to the hospital to register on a machine and suddenly glanced at the guy next to him registering for urology...

A few minutes later.

Having washed up, Xu Yun returned to the scene, the bell on his foot jingling all along.

After reaching the man, he gently bowed his hand:

"May I ask, brother, what can I do?"

This man was one of the servants holding Xu Yun yesterday, and after returning to the room, he heard the old chief steward relay the master's speculation, thinking of something, he sympathetically glanced at Xu Yun's lower body:

"You don't have the strength to chop wood or push the mill... Okay, Xiaosan!"

The man's voice had just fallen when a boy in his teens sprang out:

"Brother Yongzhu, I'm here, I'm here."

The man nodded and said to Xu Yun:

"You follow Xiaosan to fetch water. There are more than forty people in the household, and the daily water usage is quite significant.

You... Right, what's your name?"

Xu Yun thought for a moment and replied:

"I am Wang Lin, but everyone calls me Wang Mazi."

"Wang Mazi?"

Xiaosan, standing nearby, paused for a few seconds as he looked at his face:

"Your skin looks fair and clean, how could you be a 'Mazi'?"

Xu Yun sighed:

"They say a humble name brings a carefree life..."

Hearing this last sentence from Xu Yun, the tall man thought Xu Yun had recalled his sad past. After a moment of silence, he urged:

"Mazi, the past is past. That you accidentally ended up in this household was perhaps fated.

When the master returns to his hometown, he will make you an official record, so at least you won't just be someone's plaything."

Xu Yun: "...?"

I understand each word you said, but why does it feel weird when put together?

Following Xiaosan's lead, Xu Yun reached another well by the South Wing.

As Xiaosan was securing the bucket, he said to Xu Yun:

"There are two wells in the South Wing; the other fell into disrepair yesterday and needs a few days' rest before reuse.

These days, we'll focus on this one. Understand?"

Looking at Xiaosan, who seemed like a little adult, Xu Yun obediently nodded:

"Got it."

Xiaosan continued:

"As long as you understand. Our mansion houses nine family members, thirty-one servants and guards... no, adding you, that makes thirty-two people.

The water you fetch first goes to the main house. If any guests stay over, then to the East Wing. If not, it goes to the West Wing, and lastly to the South Wing."

Xu Yun nodded again:

"I remember."

Being young, Xiaosan spoke more as Xu Yun showed a positive attitude:

"Wang Mazi, you don't have to be so quiet. Do you know where you are?"

Let me tell you, in Bianjing City, the monthly pay for ordinary household servants is no more than three thousand coins. If they have families, they have to be very frugal.

But our master is generous; he offers four thousand coins monthly pay, plus New Year's money at the end of the year. Wang Mazi, guess how much I got last year?"

Xu Yun smiled and randomly guessed a figure:

"Three thousand?"

Xiaosan swiftly shook his head and proudly spread out five fingers:

"A full five thousand! My mother said that with a bit more saving, she could arrange a marriage for me in East Alley!"

Then Xiaosan's eyes showed a hint of expectation, as if he thought of something:

"Last year's New Year's money was five thousand. I'm afraid I might get no less than ten thousand this year?"

Xu Yun blinked, genuinely surprised this time:

"Ten thousand? Such a big raise? New Year's money doubled in just a year?"

"What do you mean 'work experience'?"

Xiaosan gave him a puzzled look and said:

"Last month, there was a general amnesty, and the master's friend, Dongpo Scholar, was reinstated as Chao Feng Lang in Yongzhou. With such a joyful event, wouldn't the master be inclined to give more annual bonuses?"

General amnesty.

Dongpo Scholar.

Chao Feng Lang.

These three words were like lightning bolts slicing through the night sky, heavily striking Xu Yun's heart, even causing him to feel a temporary loss of focus.

Gulp.

Moments later.

Xu Yun swallowed hard and stared intently at Xiaosan:

"Third Brother, may I ask what is the master's name...?"

Xiaosan slapped his forehead:

"Oh, I forgot to tell you, our master's surname is Su, his name is Song, and his courtesy name is Zi Rong. Appointed as a Chancellor in the Seventh Year of Yuan You, he now serves as a Counselor to the Crown Prince. Not just in Bianjing, but throughout the Great Song, he is a renowned figure!"

.....

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

## **Chapter 113 113: Zhang 104: Mission Objective: Stir Up Trouble!**

[ 1,193 words ]

Beside the well.

Just at the instant Xu Yun learned the name of Su Song, a light curtain quietly appeared in front of him.

A light curtain he was somewhat familiar with:

[Random Mission: Stir Things Up!]

[Mission Difficulty: ★★☆☆☆-★★★★☆]

[Mission Requirement: Fulfill Su Song's wish before he dies]

[Mission Time Limit: One and a half years]

[Mission Reward: Depends on the score]

[Penalty for Incomplete Mission: All male goodwill +8, Luck -5]

[Additional Note: This world is a parallel world, forgot the rest, blah blah blah  $\varepsilon(*\cdot\omega\cdot)_\prime^\circ$  :  
·☆]

Xu Yun: "..."

What should I say?

This thing is kind of strange, isn't it?

Then he took a deep breath, bringing his thoughts back to reality.

To be honest.

At the start when it seemed highly likely this was the Song Dynasty, two most probable people popped into Xu Yun's head as possible targets:

Shen Kuo, or Yang Hui.

Considering the previous connection with Little Niu's matter, the latter was even more likely.

But he never expected that the person he would encounter would actually be Su Song!

In the long history of human civilization, fields such as astronomy, physics, mathematics, chemistry, biology, literature, and others have produced countless top geniuses in their respective domains.

For example, there is Little Niu and Maxwell in physics.

Gauss and Cauchy in mathematics.

Voltaire, Lanling Xiaoxiao Sheng, and others in literature.

But through the entirety of civilization's history.

If you were to say there were individuals recognized globally as all-rounded geniuses achieving the peak of their eras in every field, there are only two, be it in the past or present, east or west:

Da Vinci, and...

Su Song.

Su Song was born in the Northern Song era, with domains spanning politics, astronomy, mechanical engineering, sciences, medicine, diplomacy, literature; he served as Prime Minister, and created seven world firsts.

Before BXC became a broadcast in the underworld, it once produced a documentary of the East.

The documentary called Su Song "the world's top scientist of the 11th century," and even uttered a classic phrase:

"Rather than Su Song being the Da Vinci of the East, Da Vinci is the Su Song of the West."

Ignoring BXC's later shady dealings, just speaking of the documentary alone, it was hands down the most authoritative broadcast station globally, unparalleled.

This is also why, after the Zhuzhou incidents they pulled, it was imperative for us to immediately refute them — its influence was so widespread and authoritative that many people would believe them without a doubt.

Such a media lauding Su Song, it speaks for itself in terms of credibility.

Yet, due to various reasons, Old Su's fame in history has always been in a rather strange state:

Those who know him, be it past or present, foreign or domestic, almost worship him.

For instance, 21 of the top 30 universities as ranked by the Eagle specifically established research groups for him, and California Institute of Technology even created 17 world history courses about him, two more than the combined total for Little Niu and Einstein.

But those unaware of him are completely confused, feeling like, who's he?

A relative of Su Shi?

Between knowing and not knowing, there's a nearly insurmountable barrier.

Thinking of this.

Xu Yun couldn't help but look up towards the sky.

As a researcher, he respects every pioneer in human history, be it past or present, foreign or domestic.

But as a Huaxia person, Xu Yun has a deeper kinship to the local sages.

The twelve-chapter pattern, a distant tribute across time, a resonance buried in the blood of the descendants of Yan and Huang.

Also, this blue garment on him, Xu Yun didn't feel the slightest discomfort, and it looked much more pleasing than Little Niu's husky pants.

"This is..... a sense of national identity."

Then Xu Yun brought his gaze back to reality, assisting Xiaosan in pulling the water bucket while pondering how he should proceed next.

According to Xiaosan's words.

The Emperor has issued a general amnesty this year, which undoubtedly places the timeline at the year 1100 AD.

Additionally, they were in Bianjing, today's Junyi City in Zhongzhou Province, judging by the temperature, it was probably summer.

Old Su passed away in June 1101, which is roughly a year from now, seeming to conflict with the mission time... Suddenly, Xu Yun thought of something and, while lifting a bucket, asked Xiaosan:

"Third Brother, let me ask you something, how old is our master this year?"

Xiaosan helped him lift a bucket of water, took a few breaths, and replied:

"He was eighty last year, it's said the palace even sent him a birthday gift, and there were some Western goods in it!"

"Eighty?"

Xu Yun feigned surprise and opened his mouth slightly:

"But I saw our master yesterday, didn't his physique seem as robust as a sixty-year-old?"

Xiaosan glanced at him with a why-are-you-so-surprised expression:

"Of course, our master's body is still in good shape, he loves strolling around the streets every day and even carries a hoe to grow some veggies in the backyard!"

Hearing this, Xu Yun nodded thoughtfully.

Generally speaking.

Elders of high status like Old Su, even in the twilight of life vitality, typically require a relatively extended period before they can't hold on anymore.

In Old Su's current health, it's theoretically unlikely that he would pass naturally within a year.

Unless...

Something unexpected happens to Old Su within the year, like...

A fall!

Those who've cared for the elderly know, the older they get, the more fragile they are against falls.

Cases where someone was spirited months ago, then became bedridden after one or two falls and soon passed away are numerous even in the 21st century.

Considering Old Su's previous physical state as well as Xiaosan's description.

Xu Yun wasn't saying this master could live to ninety, but at least surviving another three or four years shouldn't be a problem.

This can also explain the time limit given by the mission.

In fact, some scholars in later times argue Old Su's death was somewhat premature.

Because, according to the "Eastern Capital Chronicles," in the third year of Yuanfu — that's now 1100 AD, Old Su could still travel back and forth several times between Jingkou in Su Province and Bianjing.

Drinking, sword dancing, seeking old acquaintances, and even had a huge pot of dog meat by the year's end.

So the 'fall theory' has quite a bit of traction locally, you won't find exact written records, but logically it seems more reasonable.

If indeed the reality aligns with Xu Yun's guess, then trying to prevent the accident from happening wouldn't be particularly hard.

But before tackling fall prevention, there are two issues he needs to resolve first:

The first is how to have a conversation with Old Su—or more bluntly, how to showcase his value?

While Old Su's current arrangement for him is decent, it's clearly not out of equal importance, but rather some inexplicable compassion.

Back with Little Niu, he could pique interest with the phenomenon of dispersion and then use Taylor expansion for simplification, thus establishing his persona before Little Niu.

But this time, he doesn't have such an opportunity with Old Su—Old Su, as it stands, has completed the great deeds of life, with no pressing issues requiring solutions.

Theoretically, all Xu Yun can arrange is a design plan for a tombstone and a memorial service.

Therefore, which angle to approach from, proving his value must be well thought out.

As for the second matter, that would be contingent on completing the first, which is.....

Convincing Old Su not to return to Jingkou, but to stay in Bianjing.

.....

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

## **Chapter 114 105 Strange Water Delivery Method**

[ 1,380 words ]

In the previous 1665 dungeon settlement process, Xu Yun clarified one thing:

The higher the score, the better the reward he would receive.

Therefore, for Xu Yun,

to achieve a high score, Bianjing's priority was obviously higher than Jingkou's.

After all, this is the political and economic center of the entire Great Song, and the social environment is much more complex than Jingkou, making it easier to stir things up.

Moreover, from the perspective of medical safety, although the medical level of the Great Song is still at the ancient medical stage, Bianjing's medical reserves are evidently superior to Jingkou's.

If Old Su were to have an accident, like a fall, it's possible that a famous physician from Bianjing could arrive at the scene first, minimizing his injuries and preventing the early demise of such a master.

Therefore, based on the above considerations, Xu Yun undoubtedly had to keep Old Su in Bianjing.

But still, the question remains—

Where to cut in?

This is clearly not a problem that can be easily solved.

However, due to sufficient task time, Xu Yun was not in a hurry, since it was only the first day.

He temporarily put aside the matter of the entry point and started chatting with Xiaosan with the intention of gathering information and engaging in casual conversation:

"Third Brother, how old are you this year?"

Xiaosan, who was originally tying a rope, instinctively touched his headscarf and tucked in the untied edges in response:

"I'm seventeen this year."

Xu Yun slowly nodded.

If he remembered correctly, the adult age for men in the Northern Song should be twenty:

"And your full name? Is it just Xiaosan?"

Xiaosan shook his head:

"Not really, my name is Zhang San, and I'm the third child in my family, so everyone calls me Xiaosan.

Just like you're called Wang Mazi, a humble name is easier to nourish."

"I see, by the way, who was the old man leading yesterday?"

"Old man? Oh, you mean Old Chief Steward, his name is Xie Yuannian, and he's the chief steward of the entire mansion. Every day, we have to get his approval to receive money for grocery shopping...."

"And what about that man earlier..."

Xu Yun, through deliberate guidance, spent half an hour figuring out the interpersonal relationships in the Su Mansion:

Apart from Old Su, the 'Second Master' in the mansion is Old Su's fourth son, Su Mao, and he is the only son of Old Su staying in Bianjing.

Among the servants, Xie Yuannian is the chief responsible for personnel and finances, second only to him is a maid named Yue Lian.

The head of the guards is a man named Zheng Kuan, reputed to have served in the Western Army and possessing excellent martial arts skills.

Su Mao, Xie Yuannian, Yue Lian, Zheng Kuan.

These four, besides Old Su's family, make up the mansion's version of F4.

During this time, Xiaosan also inquired about some of Xu Yun's information, but seemingly out of a 'protective' mindset, he didn't press too much on Xu Yun's past.

Just like that.

Two quarter-hours passed in a blink of an eye.

After two quarter-hours,

Twenty wooden barrels were placed in front of Xu Yun and Xiaosan, filled with just the right amount of water. Xu Yun swiftly picked up one and asked Xiaosan:

"Third Brother, should we set off now?"

Xiaosan, who was humming a tune, looked at him in surprise and asked back:

"Set off where?"

"..."

Xu Yun couldn't help but raise a slight black line on his forehead, and asked:

"Weren't we supposed to deliver the water to the main house?"

Xiaosan looked even more surprised:

"We are supposed to deliver water to the main house, but there's no need to carry the barrels over."

Xu Yun:

"?????"

Seeing Xu Yun's confused face, Xiaosan waved his hand:

"Oh, it's a complicated thing. You'll find out soon. Just put the barrels down for now."

Seeing this, Xu Yun had no choice but to put down the barrel, sitting down with a bit of curiosity at a spot by the well with Xiaosan.

After a while.

At the entrance of the courtyard where the well was located, a figure of a young woman appeared.

The newcomer had a double bun hairstyle bound by blue ribbons, with smooth and shiny hair flowing neatly on her shoulders.

She wore a light green long dress, with the cuffs embroidered with light blue peonies, and a few clouds outlined in silver thread. Her round face with delicate features appeared quite charming.

Upon seeing this person, Xiaosan hurriedly got up with Xu Yun:

"Hello, Sister Yue Lian."

Xu Yun also slightly bowed his head, while a sense of realization flashed in his heart:

Yue Lian, it seems this is the big maid of the F4 group.

Yue Lian smiled familiarly at Xiaosan upon hearing his words:

"Hello, Third Brother, you're looking vibrant today. I suppose you won in Cuju yesterday?"

Xiaosan scratched his head with a sheepish grin and said:

"Hai Feng Academy lost three goals first, but unexpectedly recovered within a quarter-hour, and then won a great victory at the stake, luckily earning fifty to seventy qian, enough to buy a pork knuckle to eat."

Yue Lian nodded with a smile as she listened, her eyes filled with curiosity as she glanced over Xu Yun.

She then seemed to think of something, and a trace of pity flashed in her eyes.

Xu Yun: "?????"

Why does everyone look at me like this?

Then Yue Lian refocused and said to Xiaosan:

"Alright, Third Brother, business is important. Let's start now."

"Roger that!"

Xiaosan, still smiling, familiarly took out a small tombstone... cough, a small wooden cup from his pocket.

He then went to the wooden barrels, taking a small cup from each and drinking it all down. (For reference, see the paper [10.15986/j.1008-7192.2020.02.003](https://doi.org/10.15986/j.1008-7192.2020.02.003), which discusses the drinking habits of the privileged class in Northern Song's Tokyo (Bianliang), where servants must taste the water to ensure it's non-toxic before transporting it.)

Once Xiaosan had tried all twenty barrels of water, Yue Lian nodded.

She walked over to a stone pillar at the corner of the wall and took out a key.

Only then did Xu Yun notice that there were three rectangular stone pillars at the wall's corner in the courtyard, about half a meter high and with a side length of about thirty centimeters.

Each stone pillar had a keyhole in the middle of the left side.

Yue Lian then inserted the key into one of them and turned it gently.

The top of the stone pillar lifted like the lid of a rice cooker, exposing the hollow pipeline inside.

Then Xiaosan gave Xu Yun a knowing look:

"Wang Mazi, don't say much, just pour the water."

Saying this, he picked up a barrel of water and started pouring it into the stone pillar.

Xu Yun was stunned for a couple of seconds before quickly following suit.

Xiaosan's barrel of water was soon emptied, and Xu Yun immediately replaced him, appearing very enthusiastic.

However, despite his quick hands, a lingering doubt remained in his mind:

Clearly,

the pipeline inside this stone pillar must lead to some water reservoir, saving the manpower of carrying buckets back and forth.

But the question is, while pouring water is easy, how does this water reach the reservoir?

Xu Yun's sensing abilities are sharp—he could be sure that the deepest part of the stone pillar is at ground level, like a standard L shape.

In other words, there's no scenario where the bottom of the stone pillar is higher than the ground, with the pipeline using the height difference to transport water—in fact, this method doesn't have much feasibility because the straight-line distance from the well to the main house is nearly a hundred meters, and extending a few centimeters of slope over this distance would cost more than carrying water for decades.

Drilling diagonally is the same:

In this historical context, creating a shallow parallel pipeline isn't too difficult, but the cost of drilling diagonally is exorbitantly high.

But if the stone pillar's pipeline is parallel to the ground, how does the other end draw the water in?

Even if you pour all twenty barrels of water into a hundred-meter-long parallel pipeline, the flow rate that could be received at the other end is bound to be minimal.

The principle of a suction pump might be possible, but relying on a suction pump's one-way valve principle for a hundred-meter pipeline...

Once again, the cost would outweigh simply using manpower to deliver water.

Unless.....

It contains some special mechanism inside, enabling it to continuously draw water to the main house effortlessly under parallel conditions...

.....

Note:

I haven't requested monthly passes in a while, so please send some monthly passes my way.

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

## Chapter 115 106: Breakfast in the Song Dynasty

[ 1,315 words ]

By the water well.

Watching the well water swiftly flow through the stone column's pipes, Xu Yun's expression grew increasingly grave.

As an engineer, how could he not know what this phenomenon implied?

It was obvious.

Somewhere in the middle or at the other end of the pipe, there must be some mechanism generating suction.

However, given that the maid Yue Lian was supervising the site, Xu Yun could only temporarily shelve the many thoughts swirling in his mind and start drawing water with Zhang San.

The East Wing of the Su Mansion was a guest room, currently unoccupied.

Thus, their task was relatively laid-back; they only needed to fill the water for the main house and the West Wing.

After about a quarter of an hour.

All twenty buckets of water were poured completely.

Yue Lian replaced the cover on the stone column and locked it securely before saying to Xiaosan and Xu Yun:

"All right, Third Brother, Wang Lin, you can go have your breakfast now."

"Yay!"

Happily clapping his hands, Xiaosan turned to Xu Yun and said:

"Wang Mazi, let's go, let's go, time to eat!"

Seeing this, Xu Yun could only follow along.

Then, led by Xiaosan, the two of them passed through several courtyards and arrived at a small shed beside the South Wing.

The small shed was approximately two hundred square meters in size, with several wooden tables and chairs inside, and the roof had some rainproof and windproof measures.

When Xu Yun and Xiaosan arrived, there were already quite a few servants having breakfast inside the shed.

Breakfast, also known as morning meal.

It's what later generations refer to as breakfast.

As is widely known.

From the Shang Dynasty up until before the Tang and Song, most ancients only ate two meals a day:

A 'big meal' from 7 to 9 in the morning, and a 'small meal' from 3 to 5 in the afternoon.

By the Tang and Song Dynasties—especially after the Song Dynasty—the habit of three meals a day gradually appeared.

Some factors were economic, while others were due to the Song Dynasty lifting curfews and the rise of night market culture.

In large households like the Su Mansion, the family's breakfast was generally purchased by the servants from restaurants—as Xu Yun had seen before, the Old Chief Steward was allocating the breakfast shopping tasks before Xu Yun's arrival yesterday.

If family members who enjoyed surprises liked to explore, they could walk down the street, and the bustling Bianjing streets were evident in "Along the River During the Qingming Festival".

Only servants like Xiaosan, Yongzhu, and Xu Yun, living in the South Wing, would see the kitchen light up early to prepare food as breakfast to fill their stomachs.

In Xu Yun's impression, the term servant implies many restrictions.

The term is usually associated with descriptions like numbness, forced by life, or hopelessness.

More strictly speaking, it might even be linked to human rights.

Masters would beat and scold at will; if killed, they would pay some money to settle it, or even pay nothing, and dump the body in unmarked graves outside the city.

A human life thus silently vanishes in the long river of history.

But inside this shed, the servants Xu Yun saw were not necessarily full of joy, but at least not with empty eyes or knitted brows.

The overall spirit was lively with a self-initiated positive vibe.

This spirit wasn't forced laughter but joy from the heart.

Then Xu Yun followed Zhang San to the other side of the shed, where a food counter composed of several tables awaited them.

Main foods included steamed buns—currently called steamed cakes, stuffed buns, wheat cakes, rice porridge, and so forth.

The side dishes included pickles, minced chicken, salted meat paste, and jujube tower, among others.

Xu Yunhai was quite surprised to find that in both the rice porridge and side dishes, there were quite a few meat bits visible.

Seeing him unable to take his eyes off the food, Zhang San added:

"Wang Mazi, the servants in the mansion are divided into four categories: Qing, Dai, Li, and Yi, each with different monthly wages and meals.

For example, I am a Substitute Servant, and can choose three types of staple foods and two side dishes for breakfast.

You, without any wages, can only be considered a Cyan Servant, and according to the rules can only take two staple foods and one side dish, understand?"

Xu Yun glanced at the staple foods, noticing they were quite big; two wheat cakes were enough to fill his stomach:

"Got it."

Zhang San nodded, skillfully picked up a small bamboo basket, and began choosing food:

"Aunt Lin, get me a wheat cake, a steamed cake, and a bowl of rice porridge, plus some pickles... and that fish ball...."

Aunt Lin, the serving lady, was a woman in her fifties, short, with a slightly dark face and an apron around her waist.

She served up a basket of food according to Zhang San's request and then looked at Xu Yun:

"Are you new here? What would you like?"

Xu Yun picked up a basket and said:

"A steamed cake and a bowl of rice porridge, and also a serving of minced chicken."

Aunt Lin quickly prepared the meal, and her gaze lingered on Xu Yun for a moment.

After a few seconds, her eyes lit up as if recognizing something, shook her head, and added a stuffed bun to Xu Yun's basket.

Xu Yun: "....."

Sighing resignedly, he followed Zhang San's guiding to find a spot to sit down.

As soon as he sat down.

Zhang San, as if a starving ghost had been reincarnated, grabbed the wheat cake and took a big bite, his mouth stuffed full:

"Delicious!"

Picking water for nearly half an hour earlier had left Xu Yun a bit hungry, so he also took a bite of the bun.

Huh?

It was meat-stuffed?

He chewed more carefully, yes, pork.

The Song Dynasty was an era that loved meat, but during this period, the mainstream meat for the upper class was lamb.

During Emperor Zhenzong's reign, 350 sheep were slaughtered daily by the imperial kitchen, 280 during Emperor Renzong's, and 434,463 jin and 4 liang of lamb were used yearly during Emperor Shen Zong's.

According to the "Records of the Splendor of Tokyo", the peak population of Bianjing City, including the outer ten districts, approached a million, requiring over 3,000 sheep daily. (The most popular online version suggests over 20,000 a day, but I couldn't find the source, and it seems unreasonable to me.)

The source of these sheep was simple:

After signing the "Tan Yuan Alliance", the number of sheep consumed annually by the Song Dynasty reached alarming quantities.

Due to pricing, ordinary people found it difficult to eat lamb.

For servants like Zhang San, eating some lamb during holidays wasn't hard, but having lamb daily...

Do you really think Su Song is some delusional benevolent figure on the internet?

Thus, the meat servants commonly had in their meals during this era was usually pork.

This era's pork, due to the lack of castration, tasted somewhat gamey.

Coupled with generally poor living conditions, pork was considered inferior meat.

But despite being cheap, there was never a shortage of it in the market.

For instance, in Shi Nai'an's "Water Margin", Zhen Guanxi, killed by Lu Tixia with three punches, was a standard pork butcher.

However, being edible is one thing; being delicious is another—while Su Song shared the surname Su, his household's cook obviously lacked the culinary skills of the great Su Shi.

The meat in the stuffed bun was nauseatingly gamey, with congealed fat, making it difficult for Xu Yun to swallow even with closed eyes.

Thus, helpless, he quietly apologized, using chopsticks to scrape out the meat from the bun.

Zhang San, seeing this from across, couldn't help but ask curiously:

"Wang Mazi, why aren't you eating the pork?"

Xu Yun shook his head slightly:

"Stomach ailment, can't eat pork."

"Stomach ailment?"

Zhang San was momentarily stunned, then seemed to realize something:

"That must be a gastrointestinal issue... indeed, you people are prone to such problems in the gut."

Xu Yun: "?????"

Before he could speak, Zhang San licked his lips and with shining eyes said:

"Wang Mazi, if you're not eating the pork, shall we trade it for half a wheat cake?"

.....

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

## **Chapter 116 107: Donkey: I have borne an undeserved burden**

[ 1,365 words ]

"What? You want this meat?"

Upon hearing Zhang San's words, Xu Yun paused slightly with his left hand holding the meat.

After regaining his senses, he immediately pushed the bamboo basket towards Zhang San:

"Hey, if you want to eat it, just take it. Why exchange?"

A boy eats a lot, he needs the nutrition to grow."

"That won't do."

Zhang San seriously shook his head as he took the bamboo basket:

"Exchanging white flour for meat is already a gain for me, how can I let you lose more food for no reason?"

Although you don't earn wages, you still have to do some work with us. If you're not full, how will you have the energy to work?"

As he spoke, he quickly broke the steamed bun he was holding into two halves and handed the noticeably larger piece to Xu Yun.

Looking at this seemingly rough but actually value-conscious young worker, Xu Yun sighed slightly.

If that Teacher Luo from the future saw this, who knows whether he would continue on Zhang San's path of lawlessness.

Seeing Zhang San's firm attitude, Xu Yun had no choice but to stop refusing.

He took the half of the steamed bun, dipped it into the rice porridge, and as he ate, he asked:

"Third Brother, is the morning meal for servants in every mansion in Bianjing like it is in our household?"

"How is that possible?"

Zhang San happily picked up a piece of fatty meat, stuffed it into his mouth with some pickled vegetables, and mumbled:

"Our master is famously kind-hearted, so the servants' food is naturally the best.

But then, other grand mansions, although not as generous as ours, aren't too far off either.

At the very least... at the very least, the total of three meals a day is a half liang of fat pork."

Xu Yun nodded thoughtfully.

Generally speaking.

A serving of farmhouse stir-fried meat priced at 25 yuan in an ordinary local eatery weighs about 3 liang before going into the pan. The internationally recommended standard adult meat portion is 200 grams, which is 4 liang.

As for the "2016 Local Resident Dietary Guidelines," it's best not to mention it. They recommend a domestic adult yearly meat intake of 40-75 grams, and the controversy has never stopped since it began.

In short.

Compared to the later generations' adult intake, the Great Song's minimum meat intake of 25 grams was already quite a lot.

As for the source of providing this minimum amount of meat...

Clearly, it wasn't because the master was kind-hearted, but because of a solid economic foundation.

In his past life, while Xu Yun was writing a "Wu Fan Disappearance Manual," he happened to research some information:

For instance, the Song Dynasty's yield per mu was 225 jin, a full 30% more than the Tang Dynasty. Together with commercial tax and maritime trade, this made the Song Dynasty's economic level quite prosperous.

But what puzzled Xu Yun was.....

How could such a large country suddenly collapse?

In twenty-seven years, the Jin army would break through this prosperous Capital City, bringing about a disgraceful tragedy.

The mountains and rivers would be shattered, and the country's fate would submerge.

Emperor Huizong and Emperor Qinzong of Song were captured.

The Empress, unable to bear the humiliation, chose to commit suicide, while the former Imperial Consort became a prostitute, leading to the complete destruction of the Northern Song.

Right now, he had a little over a year, was there a chance to do something?

To be honest.

If he was in the Late Ming, Late Han, or Late Tang periods, not to mention a year, even with ten years, Xu Yun would likely be unable to change the outcome.

Because a single person's ability is limited, and at the end of these periods, things reached a point of no return.

A person... to be more precise, a person with no power or influence, basically has no chance to turn the game around.

But this dynasty was somewhat special, its demise was quite controversial and sudden.

You could say, looking at the history of human civilization, domestic and abroad, ancient and modern, the Northern Song's series of wild actions were unique in history—even Byzantium fared a bit better than the Northern Song—after all, Constantine XI at least died defending the empire.

While the Song Dynasty was criticized for more than just the emperor, there were also factional struggles, and people like Cai Jing, Bai Shizhong, Li Bangyan, and Zhang Bangchang could be considered treacherous ministers.

However, their treachery wasn't enough to lead to the fall of the country, at least the Northern Song had popular support.

Otherwise, the later Rebel Army of Yue Fei couldn't have been formed, and the Battle of Fuping couldn't have rallied 400,000, with an actual 220,000 strong army.

For this reason, the Jin people later bragged:

"Since ancient times, only weary dynasties have been destroyed, but ours destroyed a strong Song."

Thus, compared to other dynasties, if operated properly, Xu Yun might have a chance to make a rescue.

If it didn't work out, he could pull a trick with water turning into oil to fool the metaphysical master Emperor Qinzong of Song before leaving, and jot down a poem to extend things by a second if possible.

Of course.

These are considerations for the future; the immediate urgency for Xu Yun is not aiming too high but first establishing a foothold.

After thinking for a moment, he spoke to Zhang San, who was still swallowing his food:

"Third Brother, can I ask you another question?"

Zhang San was gulping down watery rice at that moment, and upon hearing this, he quickly put down the small bowl and wiped his mouth with his sleeve:

"What is it?"

Xu Yun deliberately put on a naive expression and asked Zhang San:

"What's with the stone pillar by the well earlier?"

Zhang San gave him a puzzled look:

"What do you mean? It's just to send water to the master's bedroom, isn't it?"

Xu Yun thought for a moment, spreading his hands to demonstrate a span, and said:

"Look, the well is at least thirty to forty zhang from the master's courtyard, right? The pipe's diameter is nearly a chi; how much of the water we pour actually reaches the master?

If the rest doesn't get there, won't it be wasted?"

"Oh, you're talking about that."

Zhang San waved his hand indifferently and explained:

"Actually, I asked Sister Yue Lian about it at first. I thought maybe there was another well beneath the master's house, and the water we pour in flows down at an angle indeed.

Later on, Sister Yue Lian told me the pipe was flat, just buried less than half a chi underground, but there's something inside it that can suck water over to the master."

Xu Yun's heart trembled, and he quickly put on a naive face, asking knowingly:

"Something that can suck water? Could it be a talisman given by an Immortal?"

Zhang San shook his head and said:

"It's not a talisman, it's something our master tinkered with. I don't know what it's specifically called, but I saw it once when they replaced it last time."

Xu Yun quickly asked:

"What does it look like?"

Zhang San took another bite of the steamed bun and recalled:

"That thing is about a chi long, half a chi thick, like a round pillar.

It seems the master specially commissioned it, saying that with it, water can be sucked over.

Oh, and do you remember the mill outside your house?"

Xu Yun was still imagining the structure of the object, and upon hearing this, he instinctively said:

"I remember, it's just outside my place."

Zhang San nodded:

"When we pour water, the mill outside your place starts turning with the donkey, there's a rope beneath the mill connecting to the thing that can suck water.

Once the donkey starts turning the mill, that thing activates, and we just need to pour the water in on this end."

Xu Yun thought for a moment, then realized:

"No wonder Sister Yue Lian came from my place's direction; she must have been checking the mill first?"

And as he pondered, Zhang San suddenly recalled a certain detail:

"By the way, there was one more thing!"

"What is it?"

"When they took that thing apart last time, I saw someone stuffing in several palm-sized disks; these disks were flat on one side and had many thin blades on the other side, looking very strange!"

"Disks? Blades?"

Upon hearing this, Xu Yun was momentarily stunned before he suddenly thought of something, his pupils constricted, and he blurted out:

"Damn, a self-suction pump?"

...

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# Chapter 117 117: 108 Zhang: Not Just About the Impeller

[ 1,189 words ]

In the long history of global civilization.

Water source.

Is a keyword that no civilization can do without.

The waterwheel and water hammer in Huaxia, and the Archimedean screw pump in the West, are tools created by ancient people for water supply.

But all of these tools, without exception, are huge in size, and most of them need to work at the water source.

And their main use is actually mostly to transport water from low to high places.

Throughout the entire ancient world history, almost no civilization could achieve flat land water transport without relying on gravity.

Whether it's the Roman aqueduct system, which shocked the world, or the Tang Dynasty's water facilities in Chang'an, they are unrelated to flatland water transportation.

For instance, the Roman water supply system was composed of the old Anio aqueduct, the new Anio aqueduct, the Marcia aqueduct, the Tepula aqueduct, the Julia aqueduct, the Virgo aqueduct, the Antonine aqueduct, and so on.

The core technology of these aqueducts was the siphon or communicating vessel principle, meaning there had to be a height difference or liquid pressure.

This is also why the water brought into Rome was first supplied to fountains, because you couldn't clog it...

So Rome's water resources were indeed rich, but this referred to the fountains and taps everywhere on the streets, which were public facilities.

Residents could easily carry a bucket to fetch water, making it naturally very convenient.

But indoor and outdoor water supply were clearly two different matters.

Except for Emperor Augustus, who danced on the top of Palatino Hill, not many people could comfortably use water at home in Rome.

The Tang Dynasty was no different; the so-called convenience ended outside the door.

So Xu Yun was previously very puzzled about how Old Su could use water from the well over at the main house.

Clearly, both the siphon and communicating vessel principles had an unexplained bug:

That was the insufficient volume of injected water.

A water pipe over a hundred meters long and nearly thirty centimeters in diameter could only be filled to one fifteenth with twenty buckets of water.

Additionally, there was a very critical issue, and that was labor cost.

In this era, the cost of a servant carrying a bucket a hundred meters back and forth ten times was not high.

Therefore, the solution Old Su chose must have been low cost, meaning with the mindset of "saving the servants some trouble with little cost," something was devised; otherwise, it would be better to give a little extra silver as a subsidy.

And now, following Zhang San's words, Xu Yun's doubts were finally resolved:

Good heavens, Old Su actually came up with a self-priming pump!

A self-priming pump is a self-suction centrifugal pump.

The so-called self-priming means that without adding water, it can automatically draw water up.

It is essentially like sitting down and moving by itself.

Its working principle is to first fill the pump casing with water before starting the pump. Once started, the impeller rotates at high speed, causing the water in the impeller channel to flow towards the volute.

At this point, a vacuum is formed at the inlet, causing the intake check valve to open, allowing air in the suction pipe to enter the pump and reach the outer edge via the impeller channel.

This kind of pump does not need a foot valve because the self-priming pump's inlet usually has a built-in check valve, which we commonly call a one-way valve.

Therefore, after the pump stops, the liquid within the pump body cannot return to the original pool and is stored within the pump body, so there is no need to refill it with liquid the next time it is used.

Very simple principle, also easy to understand.

As for the appearance of the self-priming pump, imagine the air cannon from Doraemon:

Enlarge the air cannon about 1.5 times and position a brick randomly at one end, then it's about the same as a self-priming pump.

"That's not right..."

Thinking about this, Xu Yun suddenly furrowed his brows and asked Zhang San:

"Third Brother, how fast is that donkey turning the millstone?"

"Huh?"

Zhang San subconsciously responded, unsure of what Xu Yun meant:

"It's just an ordinary donkey grinding, probably slower than usual walking?"

Upon hearing this, Xu Yun's expression grew even more confused.

There are many types of self-priming pumps on home ground, but the ones currently used are mostly powered by electricity or high water pressure.

In addition to these, hand-cranking, foot-pedaling, or even water hammers could drive a self-priming pump.

But regardless of which mode is used above, a specific instantaneous power is required.

Theoretically, the work done by a donkey grinding grain is enough, but the duration is somewhat long.

In terms of unit time—say, within one or two seconds—the power from grinding doesn't seem sufficient to turn the impeller.

Contemplating to this point, a hypothesis emerged in Xu Yun's mind:

The working principle of that self-priming pump might not be as simple as just the impeller pumping water...

The prescribed breakfast time for servants at the Su Mansion was from five forty-five to seven-thirty in the morning.

Each servant was allotted fifteen minutes to eat.

After breakfast.

The 'Qing' and 'Dai' grade servants could rest for another fifteen minutes, then they had to perform laborious tasks like chopping wood, running errands, and delivering goods.

For example, poor Zhang San was assigned by Old Chief Steward to fetch goods from a silk shop.

'Li' level and above servants could rest for two quarters of an hour, and their subsequent tasks were relatively light.

Such as accompanying the mansion's young masters to play in the courtyard or go out, or following the master to visit other houses, or even pruning plants, etc.

However, although Xu Yun currently had the treatment of 'Qing' grade, he wasn't assigned any tasks.

Whether it was considering that he was not strong (being a male actor) or his lack of registration status, Old Chief Steward's attitude seemed somewhat vague.

In his words, he simply instructed him to quickly recover and just fetch some water during the day.

The rest were cryptic instructions like 'do not sit for long' and 'try to lie on your side.'

Of course.

The necessary surveillance wasn't relaxed.

Then, accompanied by several servants heading to chop wood, Xu Yun once again returned to his little courtyard.

Cre-eak cre-eak—

Just as he entered the courtyard.

Xu Yun saw a black donkey with its eyes covered, slowly pulling a millstone.

The area beneath the millstone was simply modified. As the millstone turned, a thick rope was being pulled continuously from a corner of the wall and wound around the stone support below the millstone.

Xu Yun thought for a moment upon seeing this, glanced at the servants accompanying him, then turned towards the corner of the wall, the bells on his feet jingling.

The servants did not stop him but instead busied themselves with preparing tools for work.

After all, this courtyard wall was nearly a zhang high, and next door was the mansion's inner courtyard.

Unless Xu Yun could perform the wall-passing technique, he had no possibility of escaping under everyone's watchful eyes.

Upon reaching the wall corner, Xu Yun spotted a device about the size of a domestic computer host.

The rope he saw on the millstone earlier was being slowly pulled from one side of this device.

Besides this.

The device kept making a clicking sound.

This sound wasn't unfamiliar to Xu Yun,

It seemed like...

"A balance wheel hairspring?"

...

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## **Chapter 118 109 Hook: It's over, completely over!**

[ 1,264 words ]

The balance spring is actually a compound term.

Functionally speaking, it is divided into two concepts: the balance and the spring.

In the 21st century.

The spring has been optimized to the limit, becoming an extremely fine spiral-shaped spring, 99.9% of which is used in mechanical watches.

It is about 3-4 times thinner than a human hair, with a total weight of about 2mg, yet it can withstand 600g of tension, with considerable toughness.

In timepieces, the inner end of the spring is fixed to the axis of the balance, and the outer end is fixed to the balance bridge.

When the balance is driven, the spring fixed within the balance will uniformly expand and contract due to its elasticity, simultaneously driving the balance to oscillate back and forth.

The driving force on the balance causes the spring to exert pressure, contract, and expand, driving the balance to rotate clockwise or counterclockwise.

This rotational cycle directly affects the accuracy of the watch's timekeeping, thus calibrating the time.

In fact, the application fields of the balance spring are quite broad.

Because it has a significant relationship with the mainspring:

The energy release from the mainspring is transmitted to the escapement system, driving the balance spring for simple harmonic motion, generating a reaction force to achieve deceleration.

However, with technological development, a gap has gradually formed in the relationship between the balance spring and the mainspring, or rather the balance spring has been NTRed:

Ordinary mainsprings do not require such precise movement corrections, and advanced mainsprings have other methods to achieve more accurate effects, making the balance spring unnecessary.

Thus, the balance spring and mainspring can only be seen in mechanical watches.

But who would have thought.

That in the Northern Song era, Xu Yun actually saw a device made of balance springs?

Of course.

The balance spring here certainly wouldn't be as refined as in later generations, mainly serving as an internal linkage effect.

Interestingly enough.

While Xu Yun was observing the device, a rapid clattering sound suddenly came from inside the device—

The sound was reminiscent of a bucket being thrown into a well while drawing water, with the rope pulley quickly unwinding.

Soon after, there was the sound of rushing water from the bottom of the device.

Clearly.

Old Su was using water to wash in the main room.

A few seconds later.

The sound stopped.

During this process, the rope pulled out by the millstone was unaffected and continued to drag outward.

Reaching this point.

There was no need to dismantle the device for a closer look; Xu Yun already understood everything.

The water delivery system of Su Mansion might not have been costly, but the technical level embodied in the entire process was indeed extraordinary!

This was a precise, interconnected planar water supply system:

The entire pipeline was approximately a hundred meters long, laid beneath the ground.

The material of the pipeline was unknown, possibly stone or metal.

Each day, a servant would test the water's safety in front of the head maid, and then the pre-drawn well water would be poured in through a stone pillar.

Because the stone pillar had height, the gravitational potential energy initially converted to some kinetic energy—some of it was lost in collisions, causing the well water to flow forward.

About ten meters before the entrance, a self-priming pump was installed.

This self-priming pump initially functioned by simply holding water on one side.

Simultaneously.

A donkey on the ground was constantly pulling the millstone, and the bottom of the millstone had been modified to pull the rope.

The starting point of the rope was on the other side of the courtyard, possibly twenty or thirty meters in length.

Xu Yun couldn't estimate the exact length, only knowing it was threaded through ground facilities and connected to the millstone.

As the donkey began turning the millstone, the rope was reeled in like a kite string being collected.

The pulling of the rope powered up the mainspring in the device, of which there might have been several, with the balance spring ensuring calibration.

When one mainspring was fully wound, the next continued, until all were fully wound.

When the main room or the west wing needed water, they just had to pull the switch and give it a light twist.

The mainspring would then convert the stored elastic potential energy into kinetic energy, instantly providing enough power for the self-priming pump to operate.

This is also why the pipeline diameter was as wide as thirty centimeters:

Firstly, to store water, avoiding repeated filling in a single day.

Secondly, to prevent smaller pipelines from bursting under instantaneous pressure.

"Flywheel... self-priming pump... balance spring... mainspring...."

Looking at this meticulously functioning device, Xu Yun slowly stood up from the ground, eyes filled with amazement.

Although from his perspective, this device had many areas for improvement:

For instance, the initial efficiency of potential energy conversion from the well water was low, and the stone pillar could be adjusted to an incline.

Additionally, the rope could be modified to a flat fish-like shape to increase friction and energy storage, although this would tire the donkey...

But don't forget.

Xu Yun was a modern person.

Judging Northern Song technology with a modern eye is like critiquing early online novels like Coiling Dragon and Doupo with a 2022 reading perspective, which is utterly meaningless.

Considering the present technological level, Old Su's device undoubtedly represents a pinnacle of technological achievement.

Though it was unclear how intricate the internal structure was, Xu Yun could guarantee that it was no less than four hundred years ahead of the West.

Four hundred years later would be the 16th century, a time when the West had not yet begun its technological surge.

Thinking about it.

Xu Yun instinctively lifted his head and looked at the sky.

If even in this temporary residence of Old Su in Bianjing, such a sophisticated water supply system could be found.

Then considering the dynasty that perished at the hands of the Jin People... no, in the five thousand years of Huaxia's history.

How much wisdom from the ancestors has been buried in the river of time?

One?

Ten?

Or hundreds?

Probably no one could give an accurate number.

Meanwhile.

Xu Yun's interest in Old Su, the person, grew significantly.

Although Old Su had many inventions and creations in history, unlike Little Niu, Little Niu was from the 17th century with ample surviving materials, even manuscripts.

The world's recognition of Little Niu is relatively clear, detailed, and authoritative.

Everyone knows what kind of person Little Niu was, and Xu Yun knew how to pique his interest.

But Old Su was different.

The year 1100 was nine hundred years ago, and with the abrupt end of the Northern Song and the loss of many ancient texts.

Therefore Xu Yun and posterity have no very intuitive understanding of Su Song's abilities and character.

In fact, this is true for many ancient scientists.

For instance, Zu Chongzhi from the Southern and Northern Dynasties, and some detractors even claim he plagiarized others:

He supposedly had an assistant like a comic character, who helped him derive the Da Ming Calendar.

If you ask for the name and evidence of this assistant, these people reply, 'the materials were all destroyed by Zu Chongzhi, so you can't find this person'.

It's unknown what grudge those people bear, wanting to sully the names of some sages.

Then Xu Yun shook his head, bringing his thoughts back to reality.

Looking at this still clattering device.

He suddenly thought of something, and a smile uncontrollably curled up on his lips:

Come to think of it, in native history, the inventor of the balance spring is also an old acquaintance.

His name was.....

Robert, Hook.

.....

Note:

Considering some readers might have objections, let me explain. It is currently accepted that Hook invented the balance spring in 1664, which was overturned at the Sweden CBT conference in 09.

Huygens is currently cited in the University of Oxford's physics chronicle course, defining the balance spring's correction to the spiral spring. This course is accessible via university library computers.

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

[ 1,405 words ]

To be honest.

Although Xu Yun didn't particularly like Hook, he hadn't thought about deliberately undermining Hook since leaving the 1665 dungeon.

Nor had he thought about bringing Hook's inventions to light prematurely, treating this Little Niu's giant as a sheep to be sheared.

But it seemed that fate had its own plans and wasn't ready to act according to Xu Yun's wishes.

On the second day of his arrival in this world, he was shown one of Hook's most proud inventions.

If you think about it carefully, it makes perfect sense:

Old Su's fiddling with the Celestial Sphere rotating device and the "Celestial Balance" system were the prototypes for modern astronomical clock transfers and modern mechanical clocks, and Joseph Needham personally evaluated Old Su:

"Su Song successfully integrated clock mechanisms with the observational Celestial Sphere, achieving total success in principle. He preceded the European Robert Hooke by six centuries and Fang He Fei by seven centuries."

And the balance spring, being the core of mechanical timepieces, was crafted by Old Su, which is entirely plausible.

In some respects, it is almost inevitable.

Just as if Old Su had tinkered out a car, it wouldn't be surprising to find an engine in his home, would it?

Perhaps the balance spring made by Old Su differed in appearance from those of later times, but in principle and function, they were identical or at least similar.

But in doing so, Comrade Hook of the future would be in trouble:

If Xu Yun hadn't seen this device, it would still be understandable, but now that it's confirmed Old Su created the balance spring, how could Xu Yun just watch it be taken away?

Though there was no Little Niu in this era to provide assurance, Huaxia itself was not a foreign land like Great Britain.

Leaving ample and convincing evidence in history was hardly a difficult task.

Of course.

This was still relatively a further goal.

Currently, Xu Yun needed to find a way to get himself officially recognized as soon as possible.

As for how to make his debut...

Maybe develop a new dish?

Xu Yun pondered for a moment, then decided to abandon this idea.

To be honest.

This idea had feasibility, after all, the Su Mansion wasn't the Imperial Kitchen, and if the opportunity was right, it wouldn't be hard to show off a bit.

Though Bianjing is inland, preventing him from cooking his specialty—steamed Min Province people.

But looking over his recipe collection, choosing a few dishes that could conquer this era wasn't difficult.

Because the Huaxia history of "stir-frying" officially began during the Song Dynasty:

Due to increased iron production in the Song Dynasty, the iron pan started to become widespread during this period. Though records of stir-frying exist during the Southern and Northern Dynasties and the Tang Dynasty, those were mostly a luxury only enjoyed by the affluent and high-status individuals.

The widespread frying, stir-frying, and sautéing began becoming popular after the Song Dynasty.

Therefore, at this point in time, it could be called the budding period of stir-frying, as many dishes had yet to be developed.

In theory, cooking indeed counted as a way to get in touch with Old Su.

But the issue is...

Though this way looked workable, it wouldn't make Old Su think highly of Xu Yun even if he got interested and summoned him.

The scenario would most likely be:

"Oh? I didn't expect someone of your background to cook so well? Then stay in the mansion as a cook. The First Year, take him away."

And then... nothing more.

In addition, raising pigs was not feasible.

The cycle of this method was too long, and the outcome, compared to cooking, would just mean changing from a cook to a pig farmer at best.

The entry point Xu Yun needed had to demonstrate value related to research.

Not to mention having equal exchanges with Old Su.

At least make him feel 'there's something worth exploring in this person.'

But where was this opportunity...

While Xu Yun was pondering, he suddenly heard a voice in his ear:

"Hey, Wang Mazi, Wang Mazi!"

Xu Yun came to his senses and found that Old Chief Steward had somehow ended up beside him.

He promptly cupped his hands towards Old Chief Steward:

"Hello, Old Chief Steward."

Old Chief Steward nodded slightly at him and motioned subtly with his chin towards a secluded area:

"Wang Mazi, come with me."

Xu Yun blinked and quickly followed.

Old Chief Steward then took him through a courtyard wall to a resting area for the servants, where he found a random seat.

Then, clearing his throat, Old Chief Steward said,

"Wang Mazi, you trespassed into the Su Mansion last night. According to the laws of this dynasty, you should have been taken to the government to be sentenced.

At worst, you'd be imprisoned; at best, exiled.

However, the master took pity on your unfortunate background and, out of compassion, kept you in the mansion.

All of these consequences are understood by both of us; am I correct?"

Xu Yun nodded and replied,

"Indeed."

Old Chief Steward stroked his long beard and continued,

"If that is the case, then I'll be straightforward: are you willing to join the Su Mansion's household register?"

It's well known.

During the Song Dynasty, there were two types of official domicile proofs.

One was an identity document, and the other was an identity medallion.

As for the household register mentioned by Old Chief Steward, it doesn't refer to domicile registration, but rather a contract similar to an employment agreement.

Entering a mansion's household register meant becoming its servant, establishing contractual effectiveness between the two parties.

Servants need to serve the host family,

And the host family must provide the agreed remuneration.

The purpose of signing such a contract is mainly for the host family's financial accounting, and it also serves as evidence of the agreement.

Additionally, it's important to explain that joining the register is not indenturing oneself.

During many dynasties in their prime, joining a household register was practically the same as joining a company today.

For example, in Junyi, an entry contract from the era of Emperor Xuanzong of Tang (also during the Kaiyuan Prosperity) was unearthed,

which described servant rights in no less than 47 items, almost exhaustively.

Even today domestically, few companies can do this.

This even made the hot topics list, with many ridiculing, "It's hard to tell if they hired a servant or an ancestor."

Of course.

The so-called servant rights protection was only during the "most prosperous periods."

In remote areas or ordinary times, it depended, as feudal society was no guarantee for protection; unjust deaths were commonplace.

Returning to the current situation.

Setting aside Bianjing's excellent servant protection, from a task perspective, Xu Yun had to sign this agreement.

Thus, without much hesitation in response to Old Chief Steward's inquiry, he immediately cupped his hands:

"Given such favor from the master, turning it down would mean not knowing what's good for me."

Seeing his sincere attitude, a hint of satisfaction appeared in Old Chief Steward's eyes:

"That's good, so it won't be in vain for the master's compassion for you.

Listen carefully now, the servants in the mansion are categorized into the Fourth Rank of the Qing Dynasty, each with different duties and status.

For instance, the one fetching water with you before, Xiaosan, is a Substitute Servant, and the man who tied you up yesterday is a Li Pu, while Yi Pu includes me and Yue Lian.

If you join the register, you'll start as a Cyan Servant, with a monthly allowance of three thousand coins and a small share of New Year's Money at the end of the year.

Food and clothing will be provided by the mansion, as will minor illnesses.

However, major illnesses and serious conditions will have their medical expenses borne by you. Understand?"

Xu Yun cupped his hands again:

"Understood."

Old Chief Steward then took out a contract and handed it to Xu Yun:

"This is the household register document. It details servant duties; feel free to read it and raise any concerns."

Xu Yun took the contract and started reading carefully.

To be honest.

The content of this contract was simple and quite formulaic.

It mainly outlined servant benefits and duties, with nothing conspicuously wrong on the surface.

Contracts throughout various dynasties always looked more or less the same, even the indenture contracts were written decently.

Phrases like treating them as family and caring for them as one's own would appear.

In reality.

Such words are akin to a reader promising, "Because of your words, I'll subscribe to your whole book," yet months later, the author's account still shows zero fan value.

Just take it as amusing; it's not to be taken seriously.

After reading the entire contract.

Xu Yun didn't hesitate much before signing his name:

Wang Lin, courtesy name Xiaochun.

...

Note:

It's the end of the month, please kindly give some monthly passes... for the sake of overnight code writing.

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## Chapter 120 111: Encounter with the 2nd Historical Celebrity!

[ 1,297 words ]

Since the contract handed over by Mr. Xie already had the name of the person in charge of the Su Family signed on it,

As soon as Xu Yun's handwriting was added, the entry contract took immediate effect.

This means that Xu Yun has honorably become a little servant of the Su Mansion.

Of course.

Being a newcomer in the mansion, all Xu Yun needed to do at the moment was some rough work; there was no need to wash smelly socks and underwear.

Actually, in ancient Huaxia, small household landlords had no choice in this regard, but in large households, those responsible for washing clothes and cooking were not ordinary servants.

Being meticulous and dexterous was fundamental, and they also needed to have worked in the household for at least a few years.

After all, intimate clothing, in any era, is considered very, very private, and regular servants do not have the privilege to touch them.

Moreover, considering Xu Yun's 'background' issues, Mr. Xie was kind enough not to make him sleep on a large shared bed but rather offered a small bedroom as his temporary resting place.

And so.

After signing the contract, three days flew by.

Even though the Northern Song didn't have mobile phones, WIFI, Takamine Kanai, or Tifa.

Xu Yun, after all, had lived with Little Niu for a period, and his past experiences soaking in libraries also made him less dependent on mobile phones.

Additionally, the lifestyle in the Northern Song was far more enjoyable than in the 17th century, listening daily to servants chatting indeed passed time not too harshly.

Certainly.

This also had to do with Xu Yun being new to the Northern Song.

When a person suddenly comes to a completely new environment, a sense of exploration often makes time fly by.

On the early morning of the fourth day.

Creak.

As usual, Xu Yun opened the door, yawning as he stepped outside.

Just like usual, Mr. Xie was routinely arranging tasks in the courtyard.

Yes, and the donkey was also the same.

"Old Chief Steward, Brother Yongzhu, good morning."

Xu Yun greeted familiarly, stretching, ready to go fetch water as usual.

However, before he could lift a leg, Mr. Xie stopped him:

"Wang Lin, wait a moment."

Xu Yun turned around, puzzled, and asked:

"Old Chief Steward, is there something?"

Mr. Xie glanced at him and motioned for the surrounding people to quiet down before asking:

"Wang Lin, you can read, right?"

Xu Yun nodded:

"Yes, that's correct."

In the past few days, he had taught Zhang San how to write his own name during spare moments, and given him a wild nickname for the community wandering.

After Zhang San learned, he showed off in the courtyard, so Mr. Xie knowing he could read was only natural.

Mr. Xie thought for a moment and said:

"Since you can read, don't fetch water today, hurry to have some breakfast, and then follow Yongzhu to deliver a message."

"Deliver a message?"

Mr. Xie nodded, explaining:

"Master has loved reading since childhood. Recently, an Assistant Minister of the Ministry of Rites from Huang Prefecture has been promoted to Central Attendant and, besides bringing his family and belongings to the capital, has brought many rare books—

Master agreed via correspondence a month ago to borrow fifty volumes of unique books from Huang Prefecture, and today is the day to send servants to retrieve them.

Borrowing books is a matter of gentlemanly agreement, and the Assistant Minister is known to be an upright person, but just in case, it's better to be attentive during the handover...."

After listening to Mr. Xie's explanation filled with refined language for a few minutes, Xu Yun understood the cause:

In simple terms, a Northern Song official was recently promoted from a regional position to the Central Commission in Beijing and brought many special books. Old Su had arranged to borrow a few volumes.

Today is the day to collect the books, requiring someone to take the greeting letter and get the books.

However, to prevent possible disputes, the servant sent must be literate, verifying the book titles one by one before passing over the borrowing document.

And as luck would have it...

Not many literate servants are present in the mansion today.

There has always been much debate regarding literacy rates across the various ancient Huaxia dynasties, as everyone's standards for literacy vary greatly.

For instance, recognizing one's name is literacy, while knowing more than 200 characters also counts as literacy.

But the cultural degrees represented by both are entirely different concepts.

However, the commonly acknowledged point is:

The highest literacy rate in ancient Huaxia should have been during the Eastern Zhou to the Qin Dynasty, reaching about 20%.

The exact literacy rate of the Song Dynasty isn't easy to determine, but excluding the educated scholar and civil servant groups, not many could understand fifty book titles.

There were a few literate servants in the Su Mansion, but today is the Minister of the Secretariat's birthday, and Old Su's fourth son, Su Mao, took these servants to celebrate.

Those leftover literate servants are usually stewards, reluctant to do this job—since the Assistant Minister's residence in the west of Bianjing City is a good ten li away from the Su Mansion.

So Mr. Xie thought it over: hey, Wang Mazi was a male actor, must have some literacy in his belly, so just send him over.

Hmm... Mr. Xie wasn't aware of Zhang San's story.

As for Xu Yun's chance to escape...well...

Even with other servants accompanying, even if Xu Yun truly ran away, so what?

Restraining Xu Yun's movements in the mansion and putting bells on him was mainly to prevent him from disturbing the master's and young misses of the Su Mansion, as Xu Yun was not a stable factor back then.

As for outside the mansion—feel free to flee. Without identity documents or a waist badge, surviving even five days would be considered lucky.

These days, Xu Yun had stayed in the South Wing without any chance of stealing, so if he ran away, Su Mansion would only lose a few meals.

Master had planned out his life path, yet if he couldn't enjoy it, he deserves to be scolded as such wherever.

Subsequently, Mr. Xie lightly coughed, saying:

"Wang Lin, what's your decision?"

Xu Yun was already weary from staying in the South Wing these days, and with the chance now to see some sights in Bianjing City, he naturally welcomed it:

"What reason is there to refuse to serve the master? Rest assured, Old Chief Steward, I shall accomplish this mission!"

Old Chief Steward nodded approvingly, summoning Yongzhu:

"Yongzhu, gather a few people to go with Wang Lin to fetch the books. Be careful not to damage the books, or you'll be held accountable!"

Old Su, a reading fanatic, borrowed books often, so Yongzhu was quite experienced:

"Rest assured; leave it to me."

Then Mr. Xie took out two documents from his sleeve and handed them to Xu Yun:

"The one on top is the greeting letter; present it to the front gate after meeting.

The one below is the borrowing document, which should be delivered only after confirming the book list accuracy. Understood?"

Xu Yun took the documents, nodded:

"Understood."

Seeing this, the Old Chief Steward waved gently:

"Since you understand, hurry up and set off."

Xu Yun stashed the documents safely in his inner pocket, had some breakfast with Yongzhu and others, and left through the Su Mansion's back door.

After taking a few steps out, Xu Yun recalled something and said to Yongzhu:

"Brother Yongzhu, I forgot to ask earlier, which residence are we visiting this time?"

Leading the way, Yongzhu turned back to look at him upon hearing the question:

"The host's surname is Li, an old acquaintance of the master's mentor, the Dongpo Scholar. His name is Ge Fei; I forgot his courtesy name. He's now a Fifth Grade official and has corresponded with the master often; he lives in the west of Bianjing City."

"...Li Gefei!"

Upon hearing the name spoke by Yongzhu, Xu Yun stood frozen on the spot.

No matter that he was purely a science student; this name was not unfamiliar to him.

Because this person was named...

Li Qingzhao!

.....

Share to your friends

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

## Chapter 121 112 The Grandeur of Bianjing

[ 1,522 words ]

Speaking of talented women in Huaxia's history, three names might come to mind for many:

Xie Daoyun, Lin Huiyin, and.....

Li Qingzhao.

Whether it's [The flowers drift, the water flows. A kind of longing, two places of leisure sorrow. This feeling has no solution. Just off the brow, yet onto the heart].

Or [Things remain, but people have changed, everything is over, I want to speak but tears come first].

Or [Born to be a hero among people, die to be a hero as a ghost].

The extent to which these phrases are sung in later generations is high, even if you've only graduated high school for years, upon reflection, you might not recite the whole text, but can vaguely recall a few lines.

Of course.

As a science student, Xu Yun's knowledge of Xiaoli is probably limited to this.

Also, this girl was known as Layman Yi'an, married to Zhao Mingcheng, and once made the bold move of abandoning the city to escape.

Later, Xiaoli remarried a jerk named Zhang Ruzhou and even made the first historical report against her husband for corruption.....

As for how old Xiaoli is this year, whether she's married to Zhao Mingcheng, or when she passed away, Xu Yun doesn't know.

However, Xu Yun did follow a Song Dynasty novel back then, so he vaguely remembers that Xiaoli's father, Old Li, seemed to have been dismissed shortly after Su Shi passed away, when Xiaoli was not yet twenty.

So, if you estimate like this, Xiaoli might be just over ten years old now?

She must be a truly flower-like young girl.....

Of course.

The above statement is just a sigh; Xu Yun has no improper thoughts about this girl just because of Li Qingzhao's fame.

Not to mention that he will disappear in the future, even if he could stay in this era forever, could Xiaoli really fall for him?

After all, this girl is a talented woman, what we now call an artistic young woman, without some knowledge in his belly, it would be impossible to touch her heart.

Xu Yun's level of research on poetry is just a bit higher than Jia Qianqian's. Although he has many works that can be "plagiarized" in his mind, making poems and lyrics in this era is a complicated matter.

Matched pairs, meaning of words, poem titles, objects of recitation, these are actually random and rigid requirements.

Maybe with some dumb luck, Xu Yun might happen to get one or two right, but if he does it too often, he's bound to slip up.

Asking Xu Yun to recite "Guo family in the ditch indulges, the bride must marry" is fine, but using that stuff to woo women, he has neither the ability nor the inclination.

Women, how can they be more fun than discussing the mysteries of the world with Old Su?

All in all.

With such admiration of historical figures in mind, Xu Yun set off with Yongzhu and others.

In the Song Dynasty, Bianjing was said to have a population of a million, supporting an entire city with one nation, the most prosperous in history.

But in reality.

The million included ten suburbs around Bianjing, which were like satellite cities.

The population of the entire Bianjing urban area was about over five hundred thousand, less than the Tang Dynasty's Chang'an.

But don't think this number is small; in ancient society, this was almost one of the peaks of population.

Currently, Bianjing doesn't have many tall buildings; the tallest is the famous Fan Building.

At that time, Wang Anshi stood on the fifth floor of Fan Building and could 'overlook Bianjing,' indicating that Bianjing's buildings were mainly low-rise and small groups of buildings.

But in stark contrast to these low-rise building clusters was the bustling city life within Bianjing City.

Previously mentioned.

Song people of this era generally weren't used to cooking in the morning. The wealthy families sent servants to purchase breakfast, while ordinary people liked to go out and randomly find a small stall to fill their stomachs.

Therefore, at this time, Bianjing was almost filled with the cries of breakfast sales in every street and alley.

"New wine's here, new wine's here!"

"Here, we have thirst-quenching drinks; you can sit and rest for a while, one cent for a big bowl!"

"Lamb fried cake, top-quality lamb fried cake, six cents each, two for only eleven cents!"

"Stir-fried jelly, stir-fried jelly, anyone want? Just five cents per serving!"

The prices in the Northern Song Dynasty have always been a very controversial and interesting topic in later generations, because over the span of the Song Dynasty, the purchasing power of the same currency was completely different.

How big was this fluctuation?

The same penny had a difference of 50 times between its low value and peak value in purchasing power!

However, the reason for this situation is largely attributed to the Jingkang incident; in the current year 1100, the purchasing power of Copper Coins, although slightly depreciated compared to the early Song, was still in a relatively normal range.

Readers who have attended elementary school should all know a formula:

One thousand Copper Coins= one thousand Wen.

Zhang San once told Xu Yun that his salary was four thousand coins per month, which converts to four thousand Copper Coins.

The salary of other servants in the mansion was three thousand, that is, three thousand cents.

Therefore, at this time, the price level in Bianjing was somewhat similar to that of domestic prefecture-level cities before 2008—monthly salaries were generally three thousand, with a meat bun costing six, and stir-fried noodles five.

A servant like Zhang San would have a salary of about four thousand, similar to a civil servant.

However, with a mother and sister to support and subsidize, his pocket wasn't very loose.

Of course.

This is only a very simple comparison, and can't be seriously converted like this.

After all, each era's productivity is different; salt, which is cheap and abundant in later generations, could be as valuable as meat in ancient times.

On a related note.

At this time, a Prime Minister's salary, when converted to today, was about 3.6 million Huaxia Coins.

Returning the view to reality.

Besides the bustling food stalls, the streets were also filled with lots of other vendors:

Those performing tricks, fortune-tellers, those carrying goods with shoulder poles, amateur herbalists, etc...

Looking at this lush and strongly ancient scene in front of him, Xu Yun felt full of emotion.

Actually, he has indeed seen more bustling scenes in later generations:

A few years ago, he went to the Bund in Shanghai during the national holiday, and the scene was much more bustling than Bianjing.

It's said that at that time, millions of people gathered on the several kilometers of the Bund.

But different from the noise of cars in Shanghai...or rather in later times.

Bianjing City at present was filled with a unique ancient Huaxia aura.

Scholars in azure robes, ordinary people in plain clothes, elders in fine garments, women in colorful dresses...

All sorts of ancient and classical Huaxia ancestors shuttled to and fro, giving Xu Yun a shock and cleansing from bloodline and spirit.

This was his first true encounter with Bianjing and this era.

He witnessed for the first time what is called...

The most prosperous era.

Afterward, the group walked for a while, and as the sun rose, Xu Yun and the others began to sweat unconsciously.

When passing by a stall, Xu Yun suddenly turned his eyes:

"Brother Yongzhu, it's hot now, and we have plenty of time.

How about I treat you all to a drink of sour plum soup in the store."

The journey between the Li Mansion and the Su Mansion was more than ten li, considering the time spent verifying the books, Old Su had specially given them three hours for the affair, so they indeed had ample time.

As for the money for the treat.....

Although Xu Yun had not yet received his 'pay,' he did bring some small gold and silver when he transmigrated.

Converting roughly, it was enough to cover seven or eight years of Zhang San's earnings.

At the time, Old Su had generously returned these pieces of gold and silver to him, so Xu Yun was quite confident in his ability to treat.

Yongzhu, leading, stopped in his tracks, looked up at the sky, and said with some interest:

"Alright, let's rest for a moment, Wang Mazi, you're making us spend."

"Hey, what's a little spending? At most, a few cents."

Xu Yun said with a smile as he walked into the shop and said to the shopkeeper:

"Shopkeeper, four bowls of sour plum soup, please!"

The owner of the shop was a lean and dark old man. Hearing this, he quickly greeted:

"Alright, welcome inside, guests!"

A moment later.

The old man came up with a wooden tray, placing four bowls of sour plum soup in front of them one by one.

Xu Yun's act of treating was half to build relationships and half because he was really thirsty.

So seeing the sour plum soup served, he quickly picked up a ceramic bowl and took a big gulp.

The tang of the plum exploded in his mouth, and along with it came a.....

refreshing hint.

That's right.

The sour plum soup is chilled!

....

Note:

To avoid being called excessive, let's first mention that this chapter, including the previous chapters involving the self-priming pump, will all tie together in later plots, though I won't spoil the details. (Well, I kind of already did.)

So if readers find something unused when the dungeon ends, feel free to demand a refund from me.

Share to your friends

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

## Chapter 122 113: Li Qingzhao! (Major Chapter)

[ 1,034 words ]

In the summer of the 21st century, getting a glass of iced water is not a difficult task.

Basically, you can buy icy cold drinks at any convenience store on the street.

However, in the ancient Great Song era, wanting to drink a bowl of iced sour plum soup in the summer was not so easy.

One wonders whether this old man's family has an ice cellar, or if they use sal ammoniac to make ice?

The heat-absorbing capability of sal ammoniac was discovered in the Late Tang period; when dissolved in water, it absorbs a large amount of heat, lowering the water temperature and even freezing it.

Since then, sal ammoniac ice-making gradually became a method for producing ice in ancient Huaxia.

Now, hundreds of years later, the technology of making ice from sal ammoniac has become extremely advanced and has been popularized among the common people.

However, sometimes sal ammoniac is not easy to find, so some ordinary households use glauberite—from Old Eight Restaurant—scraped off like that.

Of course.

This shop, at present, is neither too big nor too small.

Even if they use sal ammoniac to make ice, the source of the materials clearly wouldn't be so filthy.

Meanwhile.

Feeling the icy rim of the bowl, Xu Yun had a sudden and inexplicable stir in his mind.

It was as if something fleetingly flashed through his mind that he wanted to grasp but couldn't hold onto.

Before he could think deeply, his thoughts were interrupted by Yongzhu's loud voice beside him.

"Damn, this feels amazing!"

He saw Yongzhu and the others drink half a bowl of their sour plum soup, wiping the corner of their mouths happily and exhaling the summer heat.

Perhaps the chill reached their hearts, one of the servants couldn't help but sigh softly and complain:

"Ah, the weather is getting hotter and hotter these days."

Upon hearing this, Yongzhu lifted his eyelids and glanced at him, sneering:

"Now? It's not too bad now. In another ten days or so, you'll find it hard to sleep even at night! Just put up with it for two more months and it'll be better."

Perhaps the word "endure" struck a sensitive spot in everyone's heart, for the atmosphere at the scene visibly turned somber.

Another servant with a blue birthmark on his face was silent for a moment, then suddenly said:

"Brother Yongzhu, I heard the master is only preparing to take a few people back to Jingkou this time?"

Yongzhu nodded, took up the clay bowl, and sipped again:

"This time, the master will take a dozen people back to Jingkou, while the rest will stay in Bianjing with Young Master Si. Considering the master's age now... there might not be many more trips in the future."

The servant with the blue birthmark asked again:

"Then, Brother Yongzhu, are you planning to follow the master or...?"

Yongzhu's eyes slightly lowered, and he sighed:

"Compared to Young Master Si and the master... sigh, if it weren't for my parents being so aged, I would certainly follow the master back to Jingkou."

Having said that, he glanced at Xu Yun, unsure if the invitation had left a good impression, the man continued to speak:

"Wang Mazi, these days you should visit Old Chief Steward more often.

The master is a truly good person. Now that you have no one to rely on, if you can follow the master back to Jingkou, at least you'll have somewhere to go, and leaving this sorrowful place is a good thing.

In the future, renting a few acres of poor farmland, marrying a wife, and spending the rest of your life in peace."

Xu Yun: "..."

I understand the reasoning, but what on earth is this "sorrowful place"?

But, all things considered, Yongzhu's words revealed quite a bit of information:

It's clear.

Old Su is already preparing to return to Jingkou.

Historically, Old Su indeed returned to Jingkou during the summer, but the history books don't record the specific time, only mentioning 'this year summer' in three words.

Judging by Yongzhu's words.

If all goes well, Old Su may officially set off in one to two weeks.

This is undoubtedly very important information. As mentioned earlier, from any perspective, Old Su must stay in Bianjing.

If there's really no opportunity in the next few days, Xu Yun will have to consider stirring up some big news.

After the four briefly chatted a bit more, Xu Yun settled the bill, and they continued their journey.

The layout of Bianjing City is very similar to today's Junyi, with not much change:

The dark and thick Imperial Street shoots straight to the heart of the Vermilion Bird Gate. Once inside and turning right, it's South Gate Street and Daxiangguo Temple.

Yes, back then, Granny Liu once uprooted a willow tree here.

This area is also the most prosperous part of Bianjing, during the day it's still alright, but once the night falls, various painted boats will drift on the Bian River, welcoming distinguished guests.

After passing through this area, Xu Yun and the others walked a long distance again.

Finally arriving in front of a courtyard bearing the plaque of 'Li Mansion'.

This courtyard is newer compared to Old Su's courtyard, the red paint on the door looks freshly applied, and two stone lions stand guard on either side of the gate.

The Song Dynasty was a period of rapid development for stone lions; besides squatting lions and reclining lions, a special feature—tufts—also formed.

During this period.

The tufts on stone lions placed at imperial palaces numbered 13; first-grade officials had 12, second-grade had 11, decreasing accordingly, and seventh-grade officials had six tufts.

No one else could use tufts on lions in front of their homes; this method also distinguished officials' lions from those of the common people.

Li Gefei's current official rank is fifth grade, so the stone lions in front of his home bear eight tufts.

Following Yongzhu's lead, the four of them went to a side gate and knocked on the door knocker.

After a moment.

Clack——

A board on the upper half of the side door was moved aside, revealing a pair of eyes:

"Who is it?"

Yongzhu cleared his throat and signaled Xu Yun to take out a visiting card, saying:

"We are the horses of the Counselor to the Crown Prince, granted by Your Majesty under Duke Zhao's banner. Last month, our master agreed with Lord Chief Steward to borrow books today, so we are specially sent to present the document. Please inform your elder."

Share to your friends

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

## Chapter 123 113: Li Qingzhao! (Large Chapter)\_2

[ 1,221 words ]

On the side, Xu Yun deftly slipped the visiting card through the gap.

The gatekeeper took the card, eyed its appearance, and his tone became much more polite:

"Oh, it's someone from Lord Su's mansion. Little Old Qin here, you may call me Uncle Qin. Please wait a moment, I'll inform the master."

Then the gatekeeper, surnamed Qin, closed the panel again and went to find his master.

After about a quarter of an hour.

Cre-eak—

The side door opened from within.

A meticulously dressed man, looking like a steward, stepped out and gave the group a once-over:

"Ladies and gentlemen, I am Li Gu, the master of affairs at Li Mansion. Please follow me."

Xu Yun and his group exchanged glances, obediently following along.

Upon entering the mansion.

Led by the steward, the group passed through several courtyard walls, finally stopping before a book pavilion.

The pavilion was two stories high, with a faint scent of sandalwood.

It was apparent that people frequently entered and exited the building, burning incense and reading.

At the pavilion entrance were a few sealed large boxes, with three or four guards watching over them, presumably containing the books to be exchanged.

The steward first led Xu Yun and company to the center of the courtyard, then approached the door of a small room on the left, bowing respectfully:

"Miss, the servants sent by Lord Su to fetch the books have arrived."

A moment later.

Cre-eak—

Another door opened, and a girl—perhaps more accurately a young woman—emerged from the small room.

The girl wasn't tall and appeared slender, resembling a little sprout, but was strikingly pretty.

Her face like pure white jade, lips like cherry blossoms, eyebrows drawn like ink, eyes like autumn pools, soft and delicate beyond words.

She wore a bright green dress that seemed extraordinarily vibrant amid the courtyard.

Upon seeing her, two words suddenly came to Xu Yun's mind:

Raindrops on green lotus, mist veiling solitary mountains.

Of course.

A woman who can write verses like "the most outstanding among flowers" wouldn't have low appearance.

But don't be fooled.

Though this girl appears gentle and dignified, she's actually quite the little sprout with a bold personality.

Playing Mahjong, gambling, drinking—she's tried them all, once losing 600 coins in a night with nothing to show, reminiscent of the initial appearances of Tsunade in Naruto.

Like the well-known "As if in a Dream":

At dusk by the creek pavilion,

Drunken to the point of losing my way home,

Full of joy, returning late by boat,

Accidentally straying into a deep lotus bloom,

Striving to row, striving to row,

Startling a flock of gulls and herons.

Seems poetic, right?

In reality, the poem means this young lady was already drunk, so drunk she couldn't find her way home.....

Incidentally.

This poem has just recently come out as the first work of a sixteen-year-old.

Indeed.

This is Li Qingzhao.

The greatest talent for all ages, the Great Song's foremost financial fairy, a lover of alcohol yet having a notoriously low tolerance.....

Layman Yi'an.

After exiting the small room, Xiaoli descended the stairs gracefully.

After taking a look at Xu Yun and others, she asked:

"Where are Lord Su's borrowing documents?"

Seeing this, Xu Yun stepped forward voluntarily, clasping his hands towards her:

"Reporting to Miss, the documents are with me, but we request you allow us to verify the book titles first, and if all is correct, the documents will be presented."

Xiaoli gave him a surprised glance, her tone gaining a few degrees of gravity:

"Among the books borrowed by Lord Su, there are many rare characters; do you recognize them?"

"I do indeed recognize them."

Xiaoli couldn't help but glance at him again.

In truth, from that sentence 'Do you know, do you know, should be green and red,' it wasn't hard to see, Xiaoli was quite down-to-earth and fond of going into detail.

This can be seen from the fact later she wrote books to mock Zhao Mingcheng's escape and reported Zhang Ruzhou.

This time, among the books borrowed by Old Su from Old Li, some were local anthologies unique to Huangzhou; even Xiaoli had to consult materials at first to understand them.

Thus upon hearing Xu Yun's 'reckless boasting', Xiaoli's stubborn streak came out.

But the young lady's demeanor didn't change much outwardly, just nodded quite ordinarily:

"Alright, then let's verify the book titles first."

Then the group moved to the side of the boxes, where Steward Li opened them, instructed the courtyard servants to spread a cloth on the ground, and withdrew behind the others.

Seeing this, Xu Yun looked at Xiaoli, receiving her nod of approval, stepped forward to verify the book titles.

"Farewell to Lin Tongpan of Huangzhou'....."

"Twelve Volumes of Yinqu'e's Strange Chronicles'....."

"Mr. Qingliu's Record of the Female Dormitory'....."

"Walking Bag'....."

"Miscellaneous Sequences by Ge Wu'....."

The transition between the Tang Dynasty and Song Dynasty wasn't smooth; there was the Five Dynasties and Ten Kingdoms tumult in between.

Five Dynasties and Ten Kingdoms seemed neither long nor short, stretching over sixty years approximately.

Huangzhou was right in the turmoil of Later Liang, during which Huangzhou's culture and scripts had numerous peculiarities.

While these altered scripts gradually returned to normal after the Song Dynasty.

Still, like local dialects in later eras, these altered scripts and languages were impossible to completely eradicate suddenly.

Li Gefei, influenced by Su Shi during his tenure in Huangzhou, collected numerous books and publications with Huangzhou characteristics, about twenty percent of which differed from the official culture of the current Great Song.

Some differences were in script, others were in the semantic combinations.

And when Old Li wrote letters to Old Su, it was obviously impossible to directly use the original book titles.

Therefore, the contents of the letters were actually simplified; though Old Su knew the titles were numerous, he didn't know they were this extensive, or else he might have come personally.

So Xiaoli's initial assumption wasn't pride but a genuine belief Xu Yun was boasting—this cunning girl was just waiting to ridicule Xu Yun after he faltered.

Unexpectedly, as the verification proceeded, this seemingly fair-skinned servant from Su Mansion fluently read the book titles correctly?

Is the cultural level of Su Mansion really this high nowadays?

After a quarter of an hour.

Xu Yun wiped the sweat from his forehead, holding a book he walked to Xiaoli:

"Miss, this book appears to differ from the listed title, please see for yourself."

Xiaoli took the list and the book, scanning them briefly.

Indeed, as Xu Yun stated, the list wrote and titled 'Huangzhou Nine Cities and Eight Counties Annals,' whereas Xu Yun held 'Huangzhou Nine Cities and Eight Counties' Gossip.'

Though both were similar types of volumes, with annals often authored by officials, gossip didn't necessarily follow that pattern.

They could be written by officials, hermits, or even some landlords.

Thus the contents might differ drastically, certainly constituting a miscatalogued error.

Faced with the evident mistake, Xiaoli first summoned Steward Li to instruct him to exchange the book, then asked Xu Yun:

"What's your name?"

"Wang Lin."

"Do you write poetry?"

"No."

"How about poems?"

"Also no."

"Do you write prose?"

"Even less so."

"Then what can you do?"

"Fetching water, chopping wood, and retrieving books."

"..."

Though Xiaoli didn't fully trust Xu Yun's words, seeing the clear refusal in his speech, she regretfully shook her head:

"Not writing poems nor prose, recognizing so many characters, isn't that talent wasted?"

Xu Yun smiled, choosing not to argue with this young lady.

At this point, the talented girl still remains unmarried, and neither her life's experiences nor character has reached a truly mature stage.

Perhaps it's only after the Jingkang Incident that Xiaoli will have a completely new answer to her own question.

Anyway, for Xu Yun, meeting Xiaoli herself, that goal is already achieved.

Perhaps in the future, there'll be no more intersections between the two....

Right?

.....

Share to your friends

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

## Chapter 124 124: Zhang 114: Have you heard of science?

[ 1,352 words ]

Outside the book pavilion.

After lamenting Xu Yun's "illiteracy is useless," Xiaoli no longer spoke much.

After all, in this era, the concept of class distinctions was still very clear.

Some time passed.

Steward Li returned to the scene with another book, the title being "Huangzhou Nine Cities and Eight Counties Annals."

Xu Yun checked the contents once more, and after confirming there were no issues, began placing the books back in the box with Yongzhu and others.

A quarter of an hour later.

Fifty sets of books, totaling one hundred and twenty-seven individual volumes, were all verified and sealed.

Xu Yun then went to Xiaoli's side and handed Old Su's borrowing document to her:

"Miss, this is Master Su's borrowing document. Please have a look."

Xiaoli took the document, scrutinized it carefully, and nodded slightly:

"The document is correct, you may leave now."

After speaking, her gaze lingered on the pole behind Xu Yun and others for a moment, as if she thought of something:

"You don't have a carriage accompanying you this time?"

Yongzhu, standing nearby, shook his head, knowing this young lady probably hadn't dealt with such handovers much, and explained:

"Miss, the master has now retired, soon to return to Jingkou, so there have never been many carriages in the mansion.

Moreover, servants fetching items have never used carriages, servants are for handling such tasks..."

Upon hearing this, Xiaoli was silent for a moment, then turned to Li Gu:

"Steward Li, please arrange a carriage to send these boxes of books to Duke Zhao's Mansion, as these books are rare copies, it is best to be cautious."

Steward Li immediately bowed and accepted the order:

"Understood, I will handle it right away."

Yongzhu and others exchanged glances, feeling delighted in their hearts, they quickly thanked:

"Thank you, Miss!"

Xiaoli maintained a businesslike expression, saying:

"You may go carry the book boxes, Wang Lin, come with me."

Xu Yun heard this and a cold sweat appeared on his forehead.

He didn't self-indulge in thinking Xiaoli was love-struck at first sight, so presumably, what's coming is another round of lecturing.

Women are really troublesome.jpg.

Yet, due to reasons of status, he obediently followed Xiaoli to the side.

Then Xiaoli glanced at him and said:

"Wang Lin, you and I are passing acquaintances, I don't know your family's status or where you're situated, nor do I know how learned you truly are.

But there is one thing I know:

In those books, there are quite a few characters even I don't fully understand, yet you identified and read them out one by one.

With such learning and yet claiming you cannot compose poetry or write, isn't that taking others for fools?"

Xu Yun: "..."

He really wanted to tell this little bean sprout that his language and literacy were enhancements crafted by his 'halo,' he even bantered in 17th-century English with Little Niu back then.

Xiaoli paused, then continued:

"Wang Lin, I only hope you do not waste your learning, should the day come when you can step into the literary world, either as an official or a recluse entering academia, this is the way of the world, do you understand?"

Xu Yun remained silent.

He wouldn't self-indulge in thinking Xiaoli fell for him after verifying the books' names, nor would he fantasize about Xiaoli hoping he'd gain a good status and come to ask her hand.

Xiaoli's ability to say such things largely stemmed from her earnest nature and her boldness in speaking plainly.

Back when Zhao Mingcheng abandoned the city and fled, in her indignation, Xiaoli wrote a poem expressing her emotions, let alone the current Xu Yun.

For just as she said.

Even though she wasn't sure about Xu Yun's literary capabilities, merely from his ability to discern names, he would easily qualify as a Junior Official in the government office.

Especially considering that one important criterion for Junior Officials in these times was 'know three hundred characters.'

Xu Yun was silent for a few more seconds.

Yet possibly attributed to Xiaoli's historical standing, this time he unusually replied with a few words, somewhat imbued with personal emotion:

"To receive Miss's favor, Wang Lin is deeply grateful, but I truly have no inclination towards literary pursuits, please Miss, don't waste your words on me.

As for what Miss refers to as literature being the sole path of this era, I must respectfully disagree."

Upon hearing Xu Yun's words, Xiaoli raised her brows:

"Our dynasty emphasizes literature over martial arts, as Emperor Zhenzong said, 'In books, there are houses full of gold, in books, there is Yan Ruyu, apart from the literary way, what other path is there?'"

Xu Yun sighed, pondered for a moment, and said:

"Miss, may I borrow the master's document?"

Having held onto the borrowing document since earlier, Xiaoli immediately extended her hand:

"Go ahead."

Xu Yun thanked her, took the document, and unfolded it.

He then pinched one corner of the document, allowing the remaining part to hang down naturally.

Then he said to Xiaoli:

"Miss, if I were to blow towards this paper with my thumb pointing as such, what do you think would happen?"

Xiaoli glanced at the document in Xu Yun's hand, unhesitatingly saying:

"Isn't it obvious? Naturally, it would droop even more and eventually stick to your hand."

Xu Yun smiled, said nothing, and gently blew air onto the paper.

At first, Xiaoli thought Xu Yun was putting on a show, but a few seconds later, her eyes widened suddenly:

As Xu Yun expelled his breath, the paper surprisingly began to float up! (Note: This actually has nothing to do with the Bernoulli principle)

Xiaoli's eyes widened further, ultimately taking the document from Xu Yun's hand.

She first turned the document over, then puffed her cheeks like a hamster, blowing air.

A moment later.

The document floated up again!

Little bean sprout laid down the document in a daze, looking at Xu Yun in shock:

"Wang Lin, why is this?"

Xu Yun shrugged at her:

"I don't know either, but the master once said, all things in the world have intrinsic laws, therefore I firmly believe there must be some astonishing reason behind this situation."

"Your master? Duke Zhao?"

Xu Yun nodded confidently, because Old Su indeed spoke about some things related to physics:

"Indeed."

Xiaoli already had a playful nature, now she became even more curious:

"Wang Lin, are there more such strange things?"

Xu Yun thought for a bit and asked:

"Miss, have you ever accidentally knocked over a teacup while drinking tea, spilling tea on the table?"

Xiaoli was silent for a moment, then shook her head:

"No, but it can happen."

"..."

Xu Yun was speechless for a few seconds, then said:

"Miss, why not try it, you will find that even though it's the same tea, the edge of the spill will form a dark ring much deeper in color than the center..."

Just as he finished speaking.

Xiaoli turned and walked into the side room where she had rested before.

A short while later.

The young lady came out carrying a teapot.

After returning to Xu Yun's side, she tilted the teapot, spilling some tea.

The high temperature of summer meant it didn't take long for the tea spill to begin showing signs of drying up.

Xiaoli leaned over to look, indeed, as Xu Yun described, the edges of the spill were significantly darker than the middle!

Xiaoli's little head grew even more confused:

She had deliberately filtered all the tea leaves from the pot before pouring out the tea; why did this still happen?

Seeing Xiaoli looking at him again, Xu Yun shrugged again:

"Don't ask me, I truly don't know, but each time I delve into these mysteries, the joy I receive is no less than composing poetry.

Or rather..."

"Or rather what?"

"Or rather, this too is like composing a couplet about the mysteries of the world; what we witness is the upper verse, the internal truth is the lower verse, the enjoyment therein is indescribable to others."

Looking at the tea spill on the ground, Xiaoli unusually didn't press her viewpoint further.

A while later.

Li Gu came over again, first glancing at the tea spill on the ground, then said:

"Miss, the carriage is ready."

Upon seeing this, Xu Yun quickly bowed:

"In that case, I shall take my leave first."

With that, he turned to leave with Li Gu.

But after a few steps, Xiaoli suddenly called out from behind:

"Wang Lin, what is that road called?"

Xu Yun stopped without hesitation and replied:

"Science."

After Xu Yun left.

Xiaoli looked at the tea spill on the ground, then at the document in her hand, falling into contemplation...

"Science..."

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

## Chapter 125 115 Mysterious Western Army General

[ 1,754 words ]

"Alright, Wang Mazi!"

After leaving the Li Mansion.

The steward, Li Gu, drove the carriage towards the Su Mansion, while Xu Yun and several servants had to walk back as usual.

Along the way, Yongzhu and the others changed their usual demeanor and started praising Xu Yun.

Although, as servants who couldn't recognize even a single large character, they didn't know what Xu Yun was exactly doing when verifying the list earlier, they were clear on one thing:

The young lady from the Li Mansion seemed to appreciate Xu Yun!

Although Lord Li Gefei is only a Fifth Grade official, who knows to what position he might rise in the future?

Even if he remains stuck at Fifth Grade, as long as he catches the young lady's eye, Xu Yun could at least officially become a junior official or a junior constable, right?

For servants like Yongzhu,

being able to work as a junior official in a government office would be something worth burning incense for a lifetime.

After all, becoming a steward like Mr. Xie or Yue Lian is rare; most servants spend their entire lives being just called and ordered around.

Not to mention that throughout history, the officialdom is full of dangers, and few can retreat successfully like Old Su, who has reached the pinnacle of being an official.

Some large mansions today are bustling, but tomorrow might face closure and dispersion with the downfall of a great family.

Unfortunate servants might even have to accompany their master to the execution ground, while the slightly lucky ones just have to find a new master to serve, and the risks involved are beyond description.

Therefore, in the eyes of Yongzhu and the others, Xu Yun suddenly turned from a male actor selling performances into a potential prospect.

It's not flattery, but at least everyone's attitude has improved somewhat.

The most direct expression of this change is that when passing the sour plum soup shop again, Yongzhu took the initiative to invite Xu Yun as a guest to drink two bowls.

After about another hour of walking.

Near the end of Si hour, around eleven in the morning, the four finally returned to the outside of the Old Su Mansion.

The noon of early summer was a bit hot, and quite a few fine beads of sweat had appeared on the faces of Xu Yun and the others.

However, the good news was that according to the rules of the Su Mansion, after carrying out such a large task in the morning, the chores in the afternoon would be much lighter, and they could finish work earlier.

Therefore, from far away at the mansion gate, Yongzhu and the others were already imagining the refreshing experience of washing their faces with cold water.

The entrance used by servants to enter and exit the mansion is the south gate, also commonly known as the side door.

Also, because of the direction of the road, servants returning to the mansion have to pass by the main entrance of the mansion before reaching the side door.

When Xu Yun and the others arrived at the main entrance, they found several horses tied to the hitching post at the entrance, and a carriage parked beside the stone lions.

Yongzhu led the group to avoid it from a distance, glanced at the carriage, and said softly:

"Huh? People from the Western Army? Is a military officer visiting the master?"

Xu Yun also looked at the carriage's exterior.

It was a brown-toned carriage, with a brand-new exterior, and the horses were quite large.

However, his expertise and history couldn't make connections; after a scan, he really couldn't discern any special markings on the carriage.

Perhaps, in the eyes of servants like Yongzhu who often frequented various mansions, the characteristics of this carriage are as obvious as military plates in later generations.

Friends who are familiar with history should know.

The Imperial Guard is the official army of the Great Song, mainly divided into three modules:

Hebei Imperial Guard, \*\*Imperial Guard, and Northwest Imperial Guard.

Among them, the strongest combat force belonged to the Northwest Imperial Guard, which is the Western Army.

Although in the eyes of many, the Northern Song army is considered quite weak.

But in reality, the Western Army's combat power wasn't that weak, at least it wouldn't shatter upon contact.

Looking at the entire late Northern Song period, the Western Army actually only had two major historical blemishes:

One was when Tong Guan spent money to buy Yan Yun back.

The second was during the late period when going north to seize opportunities, yet being counterattacked by the Liao Kingdom, and this Liao Army was the one defeated by the Jin Army.

The former was Tong Guan's slick maneuver, where he used the court's money to purchase back the 16 prefectures of Yan Yun from the Jin Kingdom, claiming victory in recovery, for which he was titled Duke Xu Yu.

The latter is indeed an indelible stain, but the underlying reasons are quite complicated.

The most basic situation is that in the Song-Liao wars, you could defeat the enemy, but it's hard to annihilate the living force of the enemy army, because the Song Dynasty was short of horses.

For this issue, if you really want to argue, you might have to pin the blame on Emperor Wu of Han from hundreds of years earlier — because ever since that thousand-kilometer surprise attack in the Han Dynasty, horses sold by nomads have all been gelded, unable to reproduce.

At the beginning, the Western Army had actually won several times, but they were just defeating mixed forces; the core troops saw the unfavorable situation and fled quickly, with real losses on their own elite infantry.

It's like in that "Qi Transformation into a Horse" scenario, I'm from the Dou Sect, you're Emperor Dou, but you can't catch up with me because my horse runs faster than yours.

Among the later generals responsible for revival, only Yue Fei wasn't from the Western Army, which also reveals a lot.

So it's not about justifying the Western Army; indeed, some things cannot be generalized, but it can be said that the Western Army's combat capability wasn't as bad as it seemed.

Returning to the scene at hand.

Nowadays, those qualified to ride in a sedan chair are at least commanders; who knows what they are coming to do at the retired Old Su Mansion?

With such doubts in mind, Xu Yun and the others quickly walked past the stone lions and reached the side entrance.

As soon as they entered, they were met by the hurriedly passing Mr. Xie, the Old Chief Steward.

Yongzhu quickly stepped aside and greeted him:

"Old Chief Steward, what brings you...?"

Mr. Xie, the Old Chief Steward, was originally rushing, but stopped to see the faces of several people. He immediately showed a joyful expression and swiftly handed over a money pouch:

"Yongzhu, you're here just in time. Please make another effort and take Wang Lin and Tie Niu with you to quickly grab some herbal medicine at the West Gate Pharmacy across the street with this prescription. Don't say much, we'll talk more when you're back!"

Yongzhu instinctively took the money pouch, was stunned for two seconds, then quickly came to his senses and cupped his fists:

"Understood!"

Without further questioning, he called Xu Yun and the others and turned to walk across the street.

This area where the Su Mansion is located belongs to a wealthy district in Bianjing City, so all kinds of supporting facilities such as academies, medical halls, and brothels are quite comprehensive.

For example, after leaving the mansion and turning onto the main road for less than a hundred meters, there is a West Gate Pharmacy that specializes in selling raw herbal medicines.

The pharmacy is very close to the Su Mansion, and since they were walking quickly, they reached the shop in no time.

Just as they stepped over the threshold, Yongzhu shouted:

"Shopkeeper, grab some medicine; here's the prescription!"

The shopkeeper of the pharmacy was also a perceptive person. He glanced at Yongzhu and the others' clothes and recognized them as the style of the neighboring Su Mansion:

"Coming, coming. Please have a seat, Quanfu, come and fetch the medicine!"

Xu Yun glanced at the chair nearby and, after pondering for a moment, said to Yongzhu and the others:

"Brother Yongzhu, why don't you all rest for a while? I'll stay here and wait."

After rushing around without a break for most of the day, Yongzhu was indeed a bit weary. He glanced at the chair longingly, but still insisted:

"This... doesn't seem appropriate?"

"Oh, what's the harm?"

Xu Yun nonchalantly waved his hand and smiled:

"I'm the youngest and do the least work, so it's only right for me to help relieve you all of some tasks.

Besides, Mr. Xie, the Old Chief Steward, has said that in the coming days, I only need to fetch water and water the flowers. Tomorrow, you elder brothers will still have tasks to attend to, so don't decline."

Seeing Xu Yun's gesture of goodwill, Yongzhu and the others exchanged a glance and no longer refused.

They bowed slightly to Xu Yun and then stepped aside to rest.

After they left.

Xu Yun glanced at the apprentice fetching the medicine and deliberately said:

"Shopkeeper, this prescription is for our master's personal use, so don't casually find some inferior herbs as substitutes.

Otherwise, if something goes wrong, you won't be able to handle the consequences."

The pharmacy is located in a wealthy district, and the shopkeeper often deals with such household servants feigning authority, so he wasn't afraid. He calmly stroked his beard and replied politely:

"Young man, rest assured. My West Gate Pharmacy is a family business handed down for a hundred and fifty years.

Both our herbs and medical skills have earned a solid reputation. We would never substitute with inferior goods."

"Oh?"

Xu Yun feigned disbelief and said:

"In that case, shopkeeper, I may as well ask if you can tell what ailment this prescription is meant to treat?"

In ancient feudal society, illnesses among women in the household were usually addressed by the maids or a physician would be invited to make a house call. At the very least, detailed instructions would be given before leaving.

Thus, Xu Yun did not worry that his question would involve any overstepping boundaries. The only challenge was the medical expertise of this old shopkeeper in front of him.

Sure enough.

Faced with Xu Yun's provocation, the shopkeeper didn't overthink it. He took the prescription and looked it over:

"Pseudo-ginseng... Yang Mei bark... Safflower...."

After a moment.

He put down the prescription and said to Xu Yun:

"My medical skills are limited, and some combinations in the prescription are difficult to understand in terms of efficacy."

"But judging from a few of the main ingredients, the prescription should be for..."

"Treating injuries from knives and spears."

....

Note:

At the end of the year, please vote for the monthly pass!!!!!!

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

## **Chapter 126 116 Northern Song National Hero (Large Chapter)**

[ 977 words ]

"Treat injuries from knives and spears?"

In the pharmacy.

Upon hearing the words of the old shopkeeper, Xu Yun's pupils contracted instantly, his expression thoughtful.

Although according to the old man's words, some combinations of medicines surpassed his understanding.

However, traditional Chinese medicine has a very distinct characteristic.

Once the main ingredients are identified, regardless of the efficacy, at least the general purpose of the formula can be determined.

Which means.....

The Western Army officer who came to visit Old Su likely has an injured person either himself or under his command!

And unsurprisingly.....

This person should be injured on the western front, and the situation is very critical at present!

Although Xu Yun isn't a history major, thanks to some related books, he is fairly clear about the general battle situation during the late Song period.

Because in the late Northern Song war history, one cannot overlook a very prominent figure, namely...

The eunuch Tong Guan!

Xu Yun did not remember his birth year, but there is a related piece of knowledge if you have seen it, it's hard to forget:

He died the same year as the Northern Song, holding military power for over twenty years.

Furthermore, if you roll back his history of gaining power three to five years, it's roughly the time the western front war began.

In 1100 AD, Tong Guan might not have reached his peak, but the Song Dynasty had evidently already begun military operations on the western front.

This also pertains to the Hehuang Region's capture during the Qingtang Incident, something that anyone remotely familiar with Tong Guan would have some impression of.

Of course.

What Xu Yun didn't know was.

Right around this time frame, Wang Hou happened to be suppressed by the old party, while Cai Jing secretly collaborated with Tong Guan in Qiantang, showing gratitude towards Tong Guan.

Thus he reciprocated the favor by strongly recommending Tong Guan as a Military Supervisor, and Wang Hou, forced to make a comeback, accepted Tong Guan into the Western Army's system.

From that point on.

Tong Guan, a renowned eunuch in ancient history and one of the six villains of the Northern Song, began his two-decade-long reign over military power.

The gossip about Tong Guan ends here, for now.

In summary.

At least from the timeline perspective, the ongoing battle in the Hehuang Region is intense, and someone getting injured is reasonable.

Regarding the speculation of a critical situation...

The reason is even simpler:

Though Old Su was a historically famous medical scholar, his main achievement in medicine was authoring the "Herbal Atlas", indicating a more theoretical capability.

He certainly had medical skills, but there was a significant gap between him and frontline or top-level physicians.

After all, in the field of medicine, there is a practical rule: to possess top-notch medical skills, one must have a wealth of clinical experience and foundation first.

Old Su's past record is very clear, unless aided like Xu Yun, he obviously lacked such practical opportunities.

Not to mention, this is Bianjing, the heart of the Northern Song, where the number of Imperial Physicians and renowned experts is unfathomable.

Objectively speaking.

Old Su being in the top twenty candidates would already be considered high.

The fact that the other party sought out Old Su likely means they had visited others to no avail, and could only try their luck with Old Su, hoping for one more life-saving chance.

"A Western Army officer with enough connection to visit Old Su, at the very least, must be a Vice Captain of Virtue, right?"

Xu Yun rubbed his chin, pondering the possible candidate:

"Old Zhong is currently acting as the Defense Envoy in Mingzhou, if I remember correctly, he won't go on an expedition with Tong Guan until four or five years later, and there's no word of Old Zhong or Xiaozhong being seriously injured....."

Could it be Old Zhe, Wang Zhan, or the Northern Song's third injustice... Liu Fa?"

After furrowing his brows and thinking for a while, Xu Yun still abandoned guessing.

After all, his historical knowledge is somewhat lacking, he knows the names of many famous generals from the late Song, barely remembers how they died and where, but recalling detailed personal records becomes a bit fuzzy.

Probability suggests that there might be a high chance for War God Liu Fa.

A quarter-hour later.

The shopkeeper placed a packet of medicine on the table and cupped his hands together towards Xu Yun:

"The medicine is ready, a genuine bargain at Two Hundred and Seventy Wen."

Yongzhu came over to settle the bill, then hurriedly led Xu Yun and a few others back to the Su Mansion.

As soon as they entered the side gate, Xu Yun saw Mr. Xie, the Old Chief Steward, waiting there.

Instead of greeting them, the Old Chief Steward asked directly:

"Yongzhu, the medicine?"

Yongzhu respectfully handed over the medicine packet, while holding the change in his other hand:

"Here it is... and here's the change in copper coins...."

"The copper coins are your reward!"

Mr. Xie grabbed the medicine packet and, with a casual wave, hurriedly turned and left.

After walking a few steps, he suddenly thought of something, turned back to Xu Yun and said:

"Wang Mazi, you've served men before, come help me!"

Xu Yun: "?????"

Although the words of the Old Chief Steward seemed a bit off, sounding somewhat intriguing,

the situation forced Xu Yun to not have much time to ponder and he had to obediently turn and follow.

So be it.

Odd as it might be.

Anyway, going to the medical scene to look at the situation is undoubtedly a good thing.

"Wang Mazi, be extremely careful, otherwise it'd be hard to explain for both of us."

Perhaps due to the pressure, the Old Chief Steward didn't even use Xu Yun's real name, constantly reminding him as they walked:

"The guest in the mansion today has a special condition, the maids cannot cope, so we have no choice but to call upon you and a few other precise men to help.

Once you enter the room, regardless of what you see or smell, do not lose your composure. If punished by the guests, endure it, the mansion will compensate afterward."

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

## **Chapter 127 116 Northern Song National Hero (Large Chapter)\_2**

[ 1,386 words ]

Xu Yun nodded understandingly.

The scenarios where maids are unsuitable to appear fall into just two categories.

Either the injured location is sensitive, and the patient has a strong sense of pride, much like many men in later generations prefer male caregivers.

Or...

The wound is extremely terrifying, easily causing visual impact on women, thus affecting their service work.

He then glanced at Old Chief Steward and said:

"I will bear your words in mind, Old Chief Steward. I won't disgrace the master.

But, Chief Steward, may I ask about the noble guest's background? What family are they from?

Could you reveal a bit, so I can mentally prepare myself?"

The Old Chief Steward paced a bit more slowly, seemingly in careful consideration.

After a while, he sighed softly and said:

"Alright, it's not really a secret, so listen well:

Today's noble guest at the mansion is the seventh generation descendant of Mr. Zhao Yi, and the only grandson of the Duke Li of Dai Prefecture, bearing the surname Wang and the single name Bing.

He is currently a Captain of the Fruits Division, with a formidable military reputation.

Today he comes to visit the master mainly to seek help for his elder brother. Did you remember all that?"

Xu Yun nodded subconsciously, but his heart was suddenly stirred by great waves.

Wang Bing!

Who would have thought?

The Western army officer coming to the Old Su Mansion is actually him?!

In Huaxia's homeland, Xu Yun first encountered this name during junior high school when reading "Water Margin."

In "Water Margin,"

Wang Bing initially followed Tong Guan in fighting against Liangshan, and after Liangshan's amnesty, he appeared in the Wulong Ridge battle.

He then fought over ten rounds with the Southern army commander Jingde during that period and beheaded Jingde from his horse.

Later, during the counting of spoils, Wang Bing clashed with Zhao Tan and Ruan Xiaoqi, and the two brought it up before Tong Guan.

Tong Guan, covering for his subordinates, secured an imperial decree that led to Ruan Xiaoqi's demotion to commoner status.

Ruan Xiaoqi was quite popular at that time, and Xu Yun once viewed Wang Bing as the antagonist.

But after more than ten years, when Xu Yun had rich experiences, he realized:

"Water Margin" wasn't historical fact; it contains a lot of fabricated plots.

For instance, historically, the real leaders of the Liangshan Marsh uprising were just thirty-six people and were destroyed by Zhang Shuye, on a scale incomparable to Fang La.

Also interestingly, Lin Chong's real-life counterpart in "Water Margin" is widely believed to be Zhang Shuye.

Both were equally skilled, held similar military ranks, and had quite similar experiences and personalities.

This means in the world of "Water Margin," there are essentially two Zhang Shuyes.

One became an outlaw, the other an official.

Characters like Lin Chong are created, and in fact, so is Wang Bing.

Except unlike fictional figures like Lin Chong, Wang Bing's experiences were altered when he indeed existed during the late Song.

And what kind of person was the real Wang Bing?

One perfect phrase describes him:

A person who sacrifices oneself for the nation, a national hero!

Before the Jingkang Disaster, Wang Bing was just a Western army officer from a military lineage family.

His great-great-grandfather was a Tang Dynasty Prime Minister who was decreed to die.

Wang Bing followed Tong Guan on Western expeditions for over ten years, experiencing both victories and defeats, his achievements not as dazzling as Old Zhong, Xiaozhong, or Liu Fa.

Frankly speaking, it was just his extraordinary martial skills, several championship wins in the army's internal competitions, and multiple single-handed slayings of enemy commanders on the battlefield—otherwise, "Water Margin" wouldn't choose him to attack Liangshan.

Before 1125, his most prominent achievement, arguably, was capturing Fang La alive.

That's right.

Fang La was captured alive by him.

It sounds impressive, but that's about it.

However, after the Jin armies moved south, Wang Bing ushered in the most glorious chapter of his life.

At that time, Jin forces attacked the Northern Song, and Wanyan Zonghan led troops to attack Taiyuan. Tong Guan abandoned the city to return to the capital, leaving only Wang Bing and Zhang Xiaochun to defend the city.

Wang Bing, leading the Provincial Military Commission troops, and Zhang Xiaochun, the then prefect of Taiyuan, led the city's military and civilians to desperately defend the city.

Wanyan Zonghan attacked Taiyuan for over two hundred and fifty days without success, "all of which was Wang Bing's adaptability, preventing any assault."

In this way.

Wang Bing led Taiyuan's military and civilians in staunch defense from early spring to summer and from summer to late autumn again.

The Jin soldiers attacked the city nine times, and all nine times were repelled by Wang Bing.

But unfortunately.

At that time, Emperor Qinzong of Song was cowardly, directly ceding Taiyuan to the Jin, thus abandoning it altogether.

A real pig teammate.

For nearly nine whole months, Taiyuan had no reinforcements and no supplies, food supplies in the city were exhausted, and the defenders, hungry, could barely hold their weapons.

All cattle, horses, donkeys, and mules in the city were consumed, and Wang Bing cooked bowstrings and parts of armor to fill hunger.

All green leaves on trees in the city and husks in granaries were consumed until even tree bark and weeds became food.

On the 13th of September, First Year of Jingkang, after nine months of isolated defense, Taiyuan city fell to the Jin army.

Wang Bing led the remaining dozens of personal guards in street fights against the Jin soldiers, with their battle robes nearly drenched in blood.

Some had lost an arm, others a leg.

Yet they leaned on their weapons, and not a single one was willing to surrender.

Wang Bing, after being injured many times, broke through the siege, carrying the portrait of Emperor Taizong Zhao Guangyi worshipped in Taiyuan's temple, and with his son Wang Xun, jumped into the Fen River and died.

How heroic!

At that time, Wang Bing's grandson, Wang Hang, was still young. Fortunately, the loyal old servant from the Prince's mansion took him from Shandong Qingzhou Tongchuan and begged southward, preserving a trace of the hero's bloodline.

Later, Wang Hang resided in Changping Town, Yanguan County, Lin'an. In modern times, the renowned Sinology master Wang Guowei was Wang Hang's twenty-ninth generation descendant.

This national hero, who died by drowning, exhausted his last ray of life in turning the tide yet illuminated that rather dark and humiliating history between the Northern and Southern Song Dynasties.

The most glorious chapter of his life was written with his fervent blood when the great edifice was about to collapse.

If Xu Yun's feelings for Old Su were respect and for Xiaoli curiosity,

then for Wang Bing, it was undoubtedly strong admiration!

Every patriot who sacrifices for the country deserves such admiration!

Thinking of this.

He could not help but become more eager to meet this national hero.

As Mr. Xie mentioned, he's seeking medical treatment for his brother this time.

But historical records about his brother are nearly nonexistent; could it be due to this serious injury that unfortunately.....?

Then Mr. Xie led Xu Yun through several courtyards to the East Wing specially reserved for guest rest.

Compared to the simple and cluttered South Wing, the decoration of the East Wing was significantly higher-end and the overall layout kept very simple:

A large courtyard shaped like the character "kou," with three sides being rooms, and the fourth being the entrance.

At this moment,

Several personal guards stand tall at the courtyard entrance, with a lingering battlefield aura.

After verifying their identities, they allowed Mr. Xie and Xu Yun to enter the courtyard.

The two arrived outside a north-facing guest room, where Mr. Xie knocked gently on the door:

"Master, the medicine has been bought back."

In a moment, Old Su's voice came from inside:

"Come in."

Receiving permission, Mr. Xie pushed the door open, and Xu Yun followed suit.

At this moment,

The approximately over thirty-square-meter room was filled with a mixed odor of herbs, blood, and pus.

In one corner of the room stood a finely crafted wooden bed, upon which lay a person whose face was unclear, with a chest barely moving up and down.

At the bedside sat Old Su and a middle-aged man dressed in casual clothes.

This person had sharp and handsome sword-like brows, piercing and narrow black eyes, a distinct square face with angular outlines, a burly yet not brutish build, resembling an eagle in the dark night.

Cold and aloof yet overwhelmingly imposing, standing alone, he exuded a domineering aura over the world.

No doubt.

This is...

Wang Bing!

.....

Note:

At the end of the year, seeking monthly votes; this month also has an update of 200,000 words, and later Lady Mo Li will catch up!!!!

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

## **Chapter 128 117 I Have a Solution (Combined Chapter, Last Day to Request Monthly Pass!!)**

[ 1,993 words ]

"Master, the medicine has arrived."

After entering the room,

Mr. Xie led Xu Yun quickly to the bedside, handing the medicine package to Old Su.

Old Su took the package, skillfully pulling open the sealing line.

Then he pinched a small amount of the herbs, brought them to his nose, and after a sniff, he said with satisfaction:

"The herbs are fine, Xie Yuannian, go to the courtyard and start cooking the medicine."

Mr. Xie acknowledged, took back the package, and then pointed to Xu Yun:

"Master, I came across Wang Lin on my way here, and thought he might have experience in serving others, so I brought him along. What do you think..."

"Wang Lin?"

Hearing this name from Mr. Xie's mouth, Old Su paused slightly.

He then took several glances at Xu Yun, and finally remembered this young servant in green clothing.

It had been four or five days since Xu Yun entered the mansion, and Old Su had been busy with other matters recently.

Although he hadn't completely forgotten about this small and unobtrusive figure, he admittedly hadn't paid him much attention.

After all, his care for Xu Yun was purely out of kindness, and bringing him back to Jingkou was already a benevolent act.

He couldn't possibly keep track of Xu Yun's every move.

Over the years, he had helped other refugees as well, but the logistics never required his personal attention.

Xie Yuannian already had a mature process for handling such matters, sparing him much worry.

However, with Mr. Xie's remark, Old Su recalled Xu Yun's identity as a male actor:

Although he personally had a distaste for the acting profession, his feelings were mainly directed at the patrons, not practitioners like Xu Yun.

Moreover, given the current situation, Xu Yun was indeed the most suitable servant. The maids in the mansion, having only witnessed childbirth or the slaughter of chickens, were inexperienced and unable to adapt quickly to such situations.

Among the maids and the sturdy, blooded guards, Xu Yun was undoubtedly the right and balanced candidate.

Without much hesitation, Old Su nodded and said:

"Very well, Wang Lin, you stay in the room and help me out.

By the way, quickly come and meet the Captain, and the person in bed is the Captain's brother, Wang Yue, wounded in the Western Front battle, a hero of the nation."

Xu Yun responded and stepped forward to Wang Bing.

Looking at Wang Bing standing by the bed and his brother of unknown fate, a surge of complex and overwhelming emotions arose in his heart.

After a brief thought, he solemnly bowed to Wang Bing:

"I am Wang Lin, greeting the Captain."

At this moment, Xu Yun was not wearing official attire, unable to have long sleeves reach the ground, nor to hold his hands past the crown.

Yet, his entire movement was without any slack, his waist and legs forming a perfect 90-degree angle.

This bow was not driven by hierarchy pressure, nor compelled by situation constraints.

It was purely to express a touch of respect in his heart.

This was also a salute on behalf of the countless Huaxia compatriots of future generations who could not come to this era.

This hero, who threw himself into the river and perished, flickered like a star in the night, making the starry sky representing the shameful dimness of the Northern Song not so bleak.

At least when future generations gaze at the stars, they can point to that star and say, look, that is the backbone of our nation!

The heroic spirit of the world, though millennia pass, still stands majestically.

Such a hero surely deserves a bow from Xu Yun!

In fact, if the constraints of the situation allowed, Xu Yun very much wanted to tell him:

Hundreds of years later, though the land changes hands many times, the homeland of Huaxia remains, and the bloodline of Yan and Huang continues, while the barbarians of the past have long vanished.

What supports the bloodline of Huaxia are exactly those backbones that echo the unparalleled integrity!

They are also the spirit of Huaxia...

Soul!

It's peculiar.

At this time, Wang Bing, originally worried about his elder brother's injury, paid no attention to the actions of this 'servant'.

However, for some unknown reason.

The moment Xu Yun bowed to him.

A wordless heaviness strangely surged within his heart, and a warm current flowed silently, leading him to cast a gaze upon Xu Yun.

As if there was some...

A sense of closeness?

Thus, unprecedentedly, this normally stern commander extended his hands and said:

"Please rise, no need to be overly formal."

Upon hearing this, Old Su couldn't help but slightly raise his eyelids, glancing at him with surprise.

Wang Bing's grandfather had once taught Old Su, and the families had maintained contact over the years, often visiting each other during holidays.

This gave him some understanding of Wang Bing's character:

Not mentioning distant matters, just recently at the closure of the Western Front, Wang Bing had treated Wang Hou with cold eyes.

Suddenly, Old Su thought of something, and his look towards Wang Bing changed slightly:

Could it be that his Captain nephew took a liking to Xu Yun at first sight...

He then cleared his throat lightly, brushing off the wandering thoughts in his mind.

He beckoned to Xu Yun:

"Wang Lin, come over here."

After Xu Yun approached, Old Su pointed to Wang Yue on the bed:

"You see, Zhonghou's wound is on the front. When the bandages are stained light yellow with pus, you need to remove them and replace with fresh strips.

Also, every three hours, you need to change the bedpan, and provide care for at least 5 hours a day, alternating between morning and evening shifts.

As for cleaning the lower body, that can be left to the maids. Do you understand?"

Xu Yun nodded as he listened, indicating he remembered everything.

Although he wasn't sure about Zhonghou's exact rank, with Wang Bing currently being a Junior Sixth Grade, Wang Yue couldn't possibly be a marquis.

Therefore, this must be one of the many military ranks during the Song Dynasty.

Xu Yun's judgment wasn't far from the truth; Zhonghou was indeed an ordinary military rank with only two levels:

Junior Seventh Grade Huaihua Zhonghou, and Junior Seventh Grade Gui De Zhonghou.

In which Wang Yue's rank was Gui De Zhonghou, slightly lower than his brother's.

Anyone familiar with Northern Song history would know.

The tradition of the Song Dynasty was to value rank over grade.

Thus, in the Imperial Guard system, the role of Gui De Zhonghou was roughly equivalent to the company commander in today's core combat regiment.

If we must describe, it was a position with some authority, and certainly not cannon fodder.

Although Xu Yun couldn't see Wang Yue's exact wound due to the bandages.

But judging from the thickness of the bandage and his physical condition, he was probably an intrepid warrior who led by example.

Afterwards, Xu Yun waited for another half-hour, when suddenly Old Su said:

"Wang Lin, the pus has oozed out, it's time to change the dressing.

Stand by my side, I will demonstrate the key points to you, and you can follow suit in the future."

Xu Yun's expression changed slightly, and he quickly moved to the bedside, listening intently.

At this time, Wang Yue had already been supported on the shoulder by Wang Bing, his body raised about thirty degrees.

His waist leaning against a cushion, he was humming some unidentified syllables.

Old Su held a wooden tool resembling tweezers, gently revealing Wang Yue's wound.

As the fabric was peeled off.

A strong smell of blood and pus immediately filled the small area by the bedside.

Looking towards Wang Yue's chest, one could see a diagonal gash of about thirty centimeters long.

With a width of three or four centimeters, the injury looked extremely horrific.

Yet, perhaps a small fortune amidst the misfortune, the blade had cut from Wang Yue's right chest to his left abdomen, sparing his heart.

As the bandage was lifted, a significant amount of bloody fluid flowed from the wound, but what made one frown was.....

Around the wound, there was still a large amount of decaying flesh and yellow pus sacs.

It was obvious.

The wound showed signs of infection.

Old Su shook his head and sighed as he peeled off the bandage, saying:

"Zheng Chen, Zheng Ru's injuries... I'm afraid are quite problematic."

Wang Bing's hands, supporting Wang Yue, remained steady, though his eyes flashed with a hint of evident anger:

"The terrain in Weichuan is treacherous with many trees, and the Western Xia barbarians took the opportunity to ambush from within, launching a night raid on the camp.

Night assaults on camps are common in warfare, who could have predicted, after Zheng Ru held their attack, the Western Xia barbarians disregarded friend from foe and fired poisoned arrows into the middle camp!

Zheng Ru led four hundred men to repel over a thousand enemies, yet he himself was struck by a sneak attack, with poison smeared on the blade.

If not for the rare medicine from Commander Tong to sustain his life, Zheng Ru might not have made it back to Bianjing."

Old Su used the wooden clamp to gently lift a piece of scab, knitting his brows as he said:

"Their aim was clearly Zheng Ru's life, the poison being secondary, but even smeared aged sewage on the blade.

Now Zheng Ru's wound is festering, his fever won't subside....

Although this recipe of mine is an ancestral folk remedy, whether it can save him, I have no confidence in my heart either..."

Despite these words, Wang Bing's expression didn't change much.

Yet the grip on Wang Yue's hand tightened involuntarily.

He lost his father young, and his mother passed two years ago.

Though the collateral branches of his family had a few members, direct relatives were only his nine-year-old son and Wang Yue.

From ancient times, soldiers dying on the battlefield wrapped in horsehide is considered fate and honor.

But to die from such a despicable method, that kind of "martyrdom" has nothing to do with honor at all.

However, everything now seems to be heading to a less favorable direction, if fate has truly destined such for his brother.....

The only thing he could do might just be to kill more Xia bandits to console Wang Yue.

As Wang Bing's thoughts surged.

Creak——

Mr. Xie, the old chief steward boiling medicine in the courtyard, entered the room with a bowl of medicinal soup:

"Master, the medicine is ready."

Old Su took the bowl, tasted it with a spoon, nodded:

"The heat is about right, Zheng Chen, Wang Lin, help Zheng Ru sit up."

Upon hearing this, Xu Yun quickly moved behind Wang Yue to assist Wang Bing in straightening Wang Yue, careful not to touch any wounds.

Old Su slowly stirred the soup bowl, feeding the medicine into Wang Yue's mouth, spoon by spoon.

Wang Yue was not fully unconscious yet, so the process of drinking the medicine did not encounter much trouble.

Less than half a quarter-hour.

The medicinal soup was completely poured into Wang Yue's stomach.

Then Old Su signaled Xu Yun and others to lay Wang Yue flat, letting out a long sigh:

"Whether Zheng Ru can pull through depends on this medicine.

If the fever subsides within three hours, Zheng Ru still has a chance; if not..."

Old Su didn't finish his sentence, but everyone present wasn't foolish, they naturally understood the implications.

Seeing this, Xu Yun opened his mouth, seemingly wanting to say something.

Yet, in the end, he chose to remain silent, determined to first observe the effect of Old Su's medicine.

A quarter-hour....

A half-hour.....

An hour.....

The time ticked by, as if conducting a countdown.

After three hours.

The atmosphere in the room reached an all-time low:

It had been three hours since Wang Yue took the medicine, yet instead of lowering, his body temperature increased significantly.

"Brother... Brother..."

Whether it was due to the fever, Wang Yue's consciousness grew increasingly blurry.

He waved his hands about, continually murmuring:

"Kill bandits... reclaim Yanyun... brother.... kill bandits..."

Upon seeing this, Wang Bing could no longer maintain his previous calmness.

The cold-faced man rushed to the bedside in one leap gripping his brother's hand tightly, his eyes bloodshot:

"Zheng Ru!"

Seeing this, Old Su sighed sadly,

Closing his eyes, he looked bitterly at the sky.

Just as he was about to summon Mr. Xie to give some instructions, he suddenly heard Xu Yun speak:

"Sir, I might have some ideas regarding Zhonghou's injuries."

.....

Note:

Happy New Year everyone!!!! See you on the first day of the new year!!!

It's the last day, asking for some monthly votes!!!!

.....

Share to your friends

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

## **Chapter 129 118: There Are Good Things in the Kitchen**

[ 1,390 words ]

"What? You have a way?"

Inside the room.

Hearing Xu Yun's words, Old Su had no time to react, and Wang Bing by the bedside immediately couldn't sit still.

He jumped up to Xu Yun's side in an instant, staring intently at Xu Yun:

"You have a way to save Zheng Ru?"

At this moment, Wang Bing was like a Lion King fully unleashed, his hair and beard bristling, looking extremely intimidating.

Looking at the imposing, cold-faced man in front of him, Xu Yun took a deep breath and replied:

"I dare not lie to the Captain, this humble one does have a folk remedy in hand that might save Zhonghou's life."

Wang Bing's chest heaved a few times. He gave Xu Yun a deep look and then turned to look at Old Su.

Although he did not speak, it was obvious he was seeking Old Su's opinion.

At this moment, Old Su had also opened his eyes, his brows furrowed, his expression somewhat grave.

Although his political attitude had always been non-participation in partisan struggles, quietly being a neutral party.

Yet, after years of experience and struggles, he had seen many situations where superiors were at a loss and subordinates volunteered for a mission.

As the saying goes.

Master your civil and martial skills, and serve the imperial family.

The "imperial family" here does not only refer to the emperor; it can also refer to one's superior.

As someone who had navigated the bureaucratic sea, Old Su could understand the purpose of such words and actions, which was nothing more than to prove one's worth.

For someone to climb up using legitimate means, even if a bit utilitarian, it was not disgraceful.

But the problem is...

This time, Wang Yue's situation was far different from previous literary strategies or military expeditions, one could even say it had reached a point where human efforts could not reverse it.

After all, this was fecal water entering the body...

Fecal water is full of filth, the dirtiest and most evil thing in the world.

Ordinary people would mostly cover their noses and hurriedly avoid it, and on the battlefield, fecal water could be counted as a deadly weapon.

At the onset of fecal water entering the body, there might still be some hope for treatment, but once it fully enters the body and festers, even if Hua Tuo or Bian Que were alive, they would likely have little confidence in saving him.

Indeed.

As a normal person, Xu Yun obviously wouldn't foolishly boast without reason, so he likely did have some remedies passed down from his ancestors.

But these days, folk remedies were like cell phones in later generations. Even the poorest households could produce a few, each claiming to be a top-notch cure, but in reality, they were merely rudimentary devices.

In the face of a terminal condition like fecal water entry, believing in folk remedies being effective was less probable than believing that the powerful Great Song would collapse in thirty years.

Therefore, although understanding, Old Su clearly did not believe Xu Yun truly had a way to cure Wang Yue's illness.

However, at this moment, Wang Bing was clearly not capable of such rationality. Seeing him looking at himself, Old Su could only sigh inwardly and ask:

"Wang Lin, let me ask you, where is the remedy you mentioned? Can you let me take a look?"

Xu Yun thought for a moment, shook his head, and said:

"Master, the remedy I mentioned actually refers to the preparation process of a peculiar object, rather than a specific formula.

However, since Zhonghou's condition is critical and the items in my possession are limited, even if effective, they can only temporarily sustain life.

To completely cure this ailment, it would take a considerable amount of time to prepare anew..."

Upon hearing this, Wang Bing couldn't help but look at Old Su once again.

Faced with the expectant gaze of his friend's descendant, Old Su's brows tightened further.

An unclear backgrounded male actor, an unspecified folk remedy, and a patient seemingly in his dying moments.....

The combination of these factors was enough to make Old Su, a former Prime Minister, bewildered.

Belief was certainly impossible, yet disbelief would mean Wang Yue's condition...

He then sighed and prepared to reveal Xu Yun's background to Wang Bing:

"Zheng Chen, you may not know, this person is a newly-joined household servant, he was once a male....."

Old Su hadn't finished speaking when Wang Yue suddenly cried out, interrupting him.

Simultaneously, because Wang Bing was not by his side, Wang Yue's flailing hands were unrestrained, and a movement touched his wound, immediately causing more blood to seep through the bandages.

Seeing this, Old Su quickly returned to the bedside.

He placed a hand on Wang Yue's wrist to check his pulse, his expression suddenly changed:

"Oh no, Zheng Ru is in danger!"

Zheng Ru is in danger!

Hearing these four words, Wang Bing's mind was shaken.

This cold-faced man suddenly turned to look at Xu Yun, his eyes red:

"Young man, if you truly have a remedy, please bring it quickly. If Zheng Ru can be saved, Mr. Wang will surely reward you greatly. If not, it's simply fate, and I won't blame you!"

Old Su, by the bedside, opened his mouth, seemingly wanting to say something.

But finally, he just sighed and called out to the door:

"First Year!"

A few seconds later.

Mr. Xie, the Old Chief Steward, pushed open the door and respectfully said:

"Master, what are your orders?"

Old Su did not respond to him, but instead asked Xu Yun:

"Wang Lin, how long does it take you to prepare the medicine?"

Xu Yun thought for a moment and replied:

"The item I have with me is only the key component; to produce the finished product, including preparation time... it would take at least an hour."

"An hour..."

Old Su was silent for a moment, took a deep breath:

"Then you will have an hour. Within this hour, I will do everything possible to ensure Zheng Ru's safety."

First Year, you will follow Wang Lin. Give him everything he needs, and do not ask anything else!"

Mr. Xie, the Old Chief Steward, was originally respectful and obedient. Hearing the orders, he subconsciously glanced at Xu Yun.

Although he did not know why the new servant suddenly received such treatment, his long-standing loyalty to Old Su led him to accept the command:

"Understood."

Then Xu Yun saluted both Old Su and Wang Bing before following Mr. Xie out of the room.

After leaving the room, Mr. Xie asked him:

"Wang Ma... Wang Lin, where are we going now?"

Xu Yun looked south and reflexively reported a location:

"Let's go back to my room first."

Mr. Xie did not question further and followed Xu Yun towards the South Wing.

The two quickly moved and soon returned to the courtyard where Xu Yun's room was located.

They opened the door and entered, and Xu Yun searched by the bedside, finding a small ceramic bottle.

This small bottle was slightly larger than a fast-acting heart relief pill, with a capacity of about fifty milliliters, and was one of the supplies Xu Yun had prepared before his journey.

Due to its small size, the bottle was hidden atop Xu Yun's headdress, and since it was dark at the time, it wasn't discovered during the body search.

After finding the bottle, Xu Yun said to Mr. Xie:

"Steward Xie, let's go to the kitchen."

"No problem, I'll take us..... wait a moment?"

Mr. Xie had been nodding along but suddenly caught himself:

"Where did you say?"

"The kitchen."

Mr. Xie stared at Xu Yun as if seeing a ghost, this loyal servant who never questioned his master's orders rubbed his eyes and asked:

"...Are you serious?"

"Of course, it's true. A Great Song person doesn't deceive a Great Song person!"

"..."

After a few seconds of silence,

recalling Old Su's instructions, Mr. Xie sighed and led Xu Yun towards the kitchen.

The ancients said that a gentleman stays away from the kitchen, so in most residences, the kitchen was also located in the south wing.

The layout of the Su Mansion was no exception. Xu Yun and Mr. Xie quickly reached this place full of life activity.

The person in charge of the kitchen was a man Xu Yun wasn't familiar with, roughly 70% the size of Ear Root. He was leading people to select vegetables. Upon seeing Mr. Xie, he smiled and greeted:

"Oh, Steward Xie, what brings you here today? Is the master looking for new flavors or...?"

Mr. Xie gestured to him, then spoke stiffly to Xu Yun:

"Wang Lin, we've reached the kitchen. This is the head chef, Fatty Meng. Speak to him with whatever you need."

Xu Yun nodded to Fatty Meng and asked:

"Master Meng, do you have garlic here?"

.....

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

## **Chapter 130 119: Do You Know the Value of Antibiotics? (Major Chapter)**

[ 919 words ]

"Garlic?"

Beside the kitchen.

Hearing Xu Yun's words, Fatty Meng was slightly stunned.

Then he thought of something and pointed to the basket beside him, saying:

"Little brother, are you talking about hu? That's the thing over there?"

Xu Yun turned his head in the direction he pointed, and found that the basket in the corner of the kitchen was indeed filled with garlic.

These garlic cloves looked consistent with those in later generations, but generally much larger, clearly selected from the finest garlic.

He quickly walked to the basket, picked up a head of six cloves, examined it, and nodded repeatedly:

"That's right, this is it!"

Fatty Meng, hearing this, couldn't help but have a smug smile:

"This little brother, garlic is what they call it in Deng Prefecture. We in Bianjing all call this thing hu or hu garlic.

If it weren't for my in-laws being from Deng Prefecture, I wouldn't have understood what you were saying!"

Xu Yun returned a polite smile to Fatty Meng:

"Thank you, Brother Meng,"

Not being a botanist by profession, he only knew that garlic was introduced to China in the Han Dynasty, and he wasn't really familiar with its other names.

In fact.

In ancient China, garlic had many different names.

The larger ones were generally called hu, while the smaller ones were called mountain garlic, and it wasn't until the mid-Ming Dynasty that they were formally unified under one name.

Then Xu Yun turned to Mr. Xie and said:

"Old Chief Steward, could you prepare a stone mortar for me and scald it with hot water... ahem, hot soup first.

Also, please prepare a bag of salt for me, the finer the better, oh, and a bottle shaped like a gall bladder made of boli."

Mr. Xie nodded:

"No problem."

A short while later.

The old chief steward came over with several items and handed them to Xu Yun:

"Stone mortar, salt, and a boli bottle, everything's here."

Xu Yun thanked him and then chose a relatively clean room.

He asked the old chief steward to wait outside the door while he took the prepared items into the room.

Once inside.

Xu Yun placed the stone mortar, peeled garlic, salt, his small bottle, a boli bottle shaped like a gall bladder, and a pot similar to a clay pot sourced from Fatty Meng on the table.

The boli in the gall bladder-shaped boli bottle refers to glass.

That's correct.

In this era now, glass technology had already emerged.

A famous piece of evidence is a poem by the Song Dynasty poet Yang Wanli, which includes the line "Knocked as jade chimes across the forest, suddenly pretends to glass's shattering sound on the ground" in the work 'A Child Plays with Ice'.

Besides.

Emperor Zhenzong of Song also once had tin craftsmen coat glass bottles with mercury and drank from them, licking it before bed every night.

Yes, you read correctly—drinking from mercury-coated glass, which is a part of the reason for the high mortality rate in the Zhao family.

All in all.

The current glass technology is still far from that of later generations, but the practicality or functionality is already very close.

After preparing everything.

Xu Yun first put the peeled garlic into the stone mortar and began crushing it forcefully.

Thump thump thump—

After five or six minutes.

A large amount of crushed garlic was ready.

Xu Yun poured it all into the glass bottle in order, and covered it with a lid.

He then filled the clay pot with salt, placed the glass bottle into the salt, and lifted the pot in a way similar to hanging roasting.

He then lit a fire, adjusted the amount and height of the firewood to control the temperature to about 40 degrees, and began heating.

Another half hour passed.

Seeing that the timing was almost right, Xu Yun gave a 'pop', removing the lid of the small bottle.

Immediately.

The room was filled with an extremely intense alcohol scent.

Yes.

Alcohol.

At this point, clever students must have understood Xu Yun's thought process.

Yes, what Xu Yun was preparing was allicin.

Don't judge by how common garlic seems, sounding somewhat lowly compared to penicillin or willow branches.

In reality.

This is a black tech of time-travel on a godlike level!

To say without exaggeration.

Things like cement, papermaking, taro, are like younger brothers in front of allicin.

When it comes to hard comparisons, only black gunpowder and potatoes barely match its divine level.

Because it is a type of antibiotic, and extremely easy to make.

When talking about antibiotics, most people probably think of penicillin, erythromycin, or tetracycline.

But actually, allicin is also a very powerful antibiotic.

Its antibacterial capability is no worse than penicillin, and it combats a wider spectrum of microorganisms—penicillin is only effective against bacteria but powerless against fungi, whereas allicin is one of the few types that can deal with both bacteria and fungi.

The main reason allicin is hard to popularize in later generations is its difficulty in storage, existing for only one to two hours at room temperature, and antibiotic resistance is also a big issue.

But after time traveling, its advantages are fully showcased:

Compared to the preparation process of penicillin, making allicin is too simple.

As long as you time travel to any year after the Han Dynasty, you can make allicin with just your hands.

Because to prepare allicin, you only need garlic and high-concentration alcohol.

First, crush the garlic and let it sit for an hour.

Then soak and extract with high-concentration alcohol, and then...

Step away from the operation table, and it's done!

That's right.

Just this simple, you can gingerly make a low-concentration alcohol solution of allicin.

What?

You ask how to get high concentration alcohol in ancient times?

Those with a chemistry background can use distillation, while those who flunked chemistry can directly remove the water from spirits using lime to make it.

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

## **Chapter 131 119: Do You Know the Value of Antibiotics? (Large Chapter)\_2**

[ 908 words ]

If you can't even find lime, then you might as well find a corner and bash your head in.

Additionally, if you want a higher concentration of garlic extract, you can, like Xu Yun, use a simple salt bath to promote enzymatic hydrolysis, or more advanced, add a condensation reflux.

To make a condenser, get someone to make a copper tube and soak it in water. (This theory is sound because I've personally tested it before writing this chapter, successfully creating garlic essential oil, which I used to dip dumplings in soy sauce and vinegar during Chinese New Year.)

So Xu Yun never understood.

Why do some protagonists in those time-travel novels insist on tackling logical loopholes to purify penicillin, instead of tinkering with garlic extract, such a foolproof magical tool...?

The sight returns to the original place.

Xu Yun then opened the garlic residue that had undergone a salt bath for enzymatic hydrolysis, added the anhydrous ethanol he brought, and let it sit and wait.

This bottle of anhydrous ethanol was originally prepared by Xu Yun for emergencies, but with Wang Yue's condition critical, he had no choice but to use up this good stuff.

Another hour passed.

Counting the time for preparing things beforehand, it was now close to the hour agreed upon with Old Su.

Xu Yun glanced at the glass cup and noticed that some oil-like liquid had appeared in the gaps of the garlic.

This is standard garlic essential oil.

It's not a decomposition product of garlic extract, but an important raw material for extracting it.

In the local industrial sector, factories use this stuff to extract garlic extract.

Therefore, its appearance basically signaled one result:

Garlic extract production was successful!

Thinking of this.

Xu Yun quickly took the glass cup, walked out of the room, and said to Mr. Xie standing outside the door:

"Mr. Xie, the medicine is ready. Let's hurry back to the East Wing!"

Seeing Xu Yun with a slightly elated demeanor, Mr. Xie followed suit, but he couldn't help but feel a doubt in his heart:

Could it be that this kid's confidence has grown after being under pressure for so long?

Then the two hurried back to the East Wing.

After a simple check, they were allowed into the courtyard.

Mr. Xie then led Xu Yun to the door and respectfully said:

"Sir, we are back....."

Before Mr. Xie finished speaking, a door creaked open from inside.

The one who opened the door was Wang Yue, who hurriedly said to Xu Yun:

"Well? Did you bring the medicine?"

Xu Yun nodded, raising the glass bottle in his hand:

"I brought the medicine."

Wang Yue quickly stepped aside and urged:

"Come in quickly, Zheng Ru has already lost consciousness!"

The loss of consciousness in ancient terms is not the "ahoge expression" in H-manga, but the literal loss of consciousness, that is, the common states of coma or shock.

This is also a very, very dangerous signal.

Hence, Xu Yun dared not delay, quickly entering the room and arriving at the bedside.

As Wang Yue said.

Wang Yue had completely lost consciousness by this time, and not even a groan could be heard from his throat.

However, Xu Yun noticed that at this Zhonghou's Baihui Acupoint, left temple, and ankle sole, a few silver needles were inserted.

Unexpectedly, these should be Old Su's so-called life-saving methods.

Acupuncture has always been a very magical project.

Especially for people like Xu Yun (in his past life as a writer), whose fingers, neck, and shoulders had problems almost every month.

Xu Yun had tried ibuprofen, flurbiprofen, and Voltaren, yet many times it was not as effective as acupuncture treatment in a hospital.

At least in Xu Yun's mind, acupuncture is indeed a subject worth delving into.

After entering the house, Old Su glanced at the glass bottle in Xu Yun's hand, his own silver needles still trembling:

"Wang Lin, is this the homemade remedy you mentioned?"

Xu Yun nodded and held the bottle securely with both hands, raising it in front of himself:

"What is in the bottle is the medicine, called garlic extract."

"Garlic?"

Hearing this name, Old Su's brows furrowed.

Garlic?

Can this stuff really save people?

But considering Wang Yue's life was really at stake, he hesitated to voice any doubts:

"I'm powerless against Zheng Ru's condition, you might as well give it a try, alas...."

Seeing the obvious look of pessimism on Old Su's face, Xu Yun refrained from explaining more.

After all, fecal water infection was basically an absolute terminal illness for people of this era, similar to advanced liver cancer in later generations.

Xu Yun's current approach was just as absurd as a beggar in the 21st century claiming to solve liver cancer to a chief physician in a hepatobiliary hospital room.

Except the chief physician (Old Su), concerned about the family member's (Wang Yue's) emotions and with few options himself, allowed Xu Yun to apply the medicine.

Therefore, one cannot say Old Su was pedantic or disdainful; it all boiled down to the ceiling of knowledge at the time.

After all, at this time, whether in the East or the West, the concept of modern medicine was distant.

Then Old Su stepped aside and gestured for Xu Yun to come forward.

Xu Yun quickly arrived by Wang Yue's side and gently tore away his cloth strips.

It was indeed unclear if it was an illusion.

Xu Yun felt that despite just a couple of hours apart, this man's wounds had worsened considerably.

Wang Yue's main suppurating area was slightly below the chest, situated between the lungs and the stomach—a very sensitive place.

And with fecal water containing a large amount of *Escherichia coli*, staphylococci, and other opportunistic harmful bacteria, Wang Yue's severity was actually more serious than it appeared.

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

## **Chapter 132 119: Do You Know the Value of Antibiotics? (Major Chapter)\_3**

[ 960 words ]

But similarly.

It is precisely because the source of infection is feces that the antibacterial effect of garlic extract can reach its maximum.

Among them, *Escherichia coli*, Gram-positive cocci, and Gram-negative bacilli are all targeted by garlic extract.

Even if Wang Yue really develops severe sepsis, garlic extract can still effectively achieve a lethal effect, though the methods would be more complex. (See the author's note)

Of course.

It would be better if it were just bacteremia.

After all, the current medical conditions are too limited, and many treatment plans from later times cannot be replicated.

Then Xu Yun opened the glass bottle containing garlic extract, used a sterilized spoon to scoop out a mouthful of the alcohol solution containing garlic extract.

He then gently applied it to Wang Yue's wound.

Anyone who has had alcohol applied to a wound knows.

Alcohol is different from iodine tincture; when applied to a wound, it produces a very strong irritation, a sharpness that is simply unbearable for most people.

Even a wound the size of a fingernail can make a grown man howl in pain.

However, when Xu Yun applied the garlic extract solution to Wang Yue's wound, this big man hardly reacted, with only a slight twitch of his muscles.

This is not a good sign, indicating that signaling in some areas has been completely blocked.

If the signaling can be blocked, let alone the body's functions, and even in some areas, proteins may have become inactivated.

Seeing this situation, Old Su couldn't help but frown.

Although he wasn't aware of the concepts of garlic extract and antibiotics, his sense of smell was intact:

He could smell the alcohol from the bottle and was sure it was strong alcohol.

And what happens when strong alcohol splashes on a wound, this Northern Song medical expert surely knows.

Yet Xu Yun's hand only paused slightly, then continued to apply the solution.

After about a quarter of an hour.

The wound on Wang Yue's chest was covered with garlic solution, and the whole room was filled with the smell of garlic.

Clang—

Xu Yun put the spoon back into the glass cup, stood up and said to Old Su:

"Master, the medicine has been applied."

Wang Bing, who was beside him, couldn't wait any longer and hurriedly asked:

"How long will it take for Zheng Ru to... um, if Zheng Ru can be saved, how long until we see results?"

Xu Yun thought for a moment, the local garlic extract usually takes effect in about two hours when applied topically, but the ancients had much lower drug resistance compared to later generations, so the effective time would definitely be much faster.

Breaking it down completely...

One and a half hours should be enough, right?

But out of caution, he reported a more conservative time:

"If everything goes smoothly, you should see results in one hour."

Wang Bing's lips twitched a few times, but he ultimately said nothing.

During Xu Yun's earlier pharmaceutical process, he had already learned about Xu Yun's background from Old Su.

An escaping male actor from a pleasure boat, except for somewhat strange attire, showed no special expression.

Therefore, although Wang Bing emotionally hoped his brother could survive, rationally, he kept being told that Wang Yue's life was probably counting down...

And so it went.

In the room, Wang Bing and Old Su sat while Xu Yun stood at the bedside.

The three remained silent, waiting together for the final result.

A quarter of an hour...

Two quarters...

Three quarters...

The time drifted slowly by, and Wang Yue still showed no sign of waking.

But gradually, a light began to sparkle in Old Su's eyes:

Previously, to sustain Wang Yue's life, he had stimulated several acupuncture points using silver needles, fully unleashing his vital potential without reservation.

Theoretically, Wang Yue's vitality could only persist for about two more quarters.

And now, considering Xu Yun's medication process, a full four quarters had passed.

Which is exactly half an hour.

Wang Yue's pulse was still critical, but his life had not reached an end.

So, does this mean...

Xu Yun's folk remedy seemed to be effective?

Of course.

Old Su did not voice this conclusion.

After all, no one could determine whether Wang Yue's high vitality kept defying the calls of Black and White Impermanence.

Even if Hua Tuo or Bian Que were alive, they couldn't precisely determine someone's lifespan to the exact quarter.

So he chose to continue waiting, but moved from the chair in the middle of the room to the bedside of Wang Yue.

And every now and then, he would check the pulse again.

Another quarter passed.

Old Su conducted another routine check of Wang Yue's pulse.

However, as soon as he placed his hand down, he temporarily held his breath.

His eyes filled with amazement, wonder, delight, and a trace of guilt.

He slightly parted his lips, his gaze swiftly darting back and forth between Xu Yun and Wang Bing a few times:

"Zheng Ru's pulse... seems to be improving!"

Whoosh—

Upon hearing this, Wang Bing jumped up from the chair and dashed to the bedside in one large step, completely unaware that the chair had fallen:

"Uncle Su, are you sure?"

Old Su closed his eyes again to feel the pulse, and upon reopening them, his gaze had calmed significantly.

After a moment of silence, he slowly nodded:

"Zheng Ru's pulse has already stabilized; though the internal disturbances persist, the underlying heat is pronounced.

Compared to before, it is much improved..."

As soon as Old Su finished speaking, a faint raspy voice could be heard from the bed:

"Water... water..."

...

Note:

Many classmates expect updates from me at midnight, so here's a clarification. When I say midnight, it could mean around five or six in the morning, so there's no need to stay up on purpose. My typing speed is 800 per hour, and combining chapters takes seven to eight hours, which is normal.

This chapter is a long chapter, so the timing is a bit late, not because I'm procrastinating.

Even during the Spring Festival, I don't stop; seeing that I've stayed up all night, I'm boldly asking for a monthly pass!!!

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**- Chapter 133 120: The Drawbacks of Distillation.  
(Thanks to Alliance Leader Divine Bird Ah Fei and Boss  
Wang Weihuohua!!) -**

**Chapter 133 120: The Drawbacks of Distillation.  
(Thanks to Alliance Leader Divine Bird Ah Fei and  
Boss Wang Weihuohua!!)**

[ 942 words ]

"Water..."

Inside the room.

Upon hearing this faint murmur.

The three people present were initially taken aback.

Then, almost simultaneously, they lowered their heads and looked at Wang Yue on the bed.

At this very moment.

Wang Yue on the bed had already slightly opened his eyes, and the corners of his chapped lips twitched gently.

Although his gaze remained dull and his eyes unfocused, he had clearly regained a small degree of consciousness.

"Water... I want water..."

Xu Yun, standing nearby, quickly poured a glass of water from the table and handed it to Wang Bing:

"Captain, here."

Wang Bing took the glass, supporting his brother's shoulder with one hand while bringing the water to his lips with the other:

"Zheng Ru, the water is here, drink up."

"Mmm..."

Wang Yue instinctively drank the water, his chest rising and falling a few times.

Once he had caught his breath, he looked around, somewhat dazed:

"Zheng Chen, where is this place?"

Old Su, observing the situation, stepped forward, first using his hand to simply measure Wang Yue's forehead temperature, then asked:

"Zheng Ru, do you recognize this old man?"

Wang Yue struggled to open his eyes a little wider, examining Old Su carefully before saying after a moment:

"You must be... Elder Su?"

"That's right, it's me indeed."

Old Su nodded and sighed:

"Zheng Ru, you were recently ambushed by the Xia Bandits in the camp at night, severely injured, and were sent back to Bianjing by order of Imperial Secretariat Wang. Your condition was critical...Forget it, let's not discuss it now, there will be time to explain everything to you in detail later, but you must focus on recovery."

Wang Yue responded with a murmur, somewhat foggy.

Having just returned from the brink of death, he couldn't remember what had happened.

All he felt was a sharp pain in his chest and head, as if his body were being torn apart, unable to muster any strength.

However, his brother and Elder Su were trustworthy and close people, naturally, they couldn't deceive or harm him...

As he thought.

Wang Yue felt another wave of drowsiness wash over him and quickly fell into a deep sleep, his breath audible as he snored.

Seeing Wang Yue's breathing gradually stabilize, Old Su tucked the corners of his blanket before looking at Xu Yun with a complex expression.

If before, he believed Xu Yun was only trying to make his presence felt, the current state of Wang Yue was enough to prove...

He was gravely mistaken.

But rather than feeling ashamed or embarrassed, Old Su found himself consumed by a pressing desire for answers.

This elder, already at the end of his life, felt a rare surge of curiosity.

Before Old Su could speak, Wang Bing beside him acted first.

The stern-faced man stepped forward, standing before Xu Yun, without saying a word, bowed deeply in gratitude:

"For your life-saving benevolence, Wang Bing will never forget it!"

Xu Yun, having predicted Wang Bing's intentions before he clasped his hands together, slightly sidestepped to avoid the act of gratitude:

"Captain, you're too polite. Zhonghou is blessed by the heavens; I merely added a touch of embellishment."

"Embellishment? If this is embellishment, then there are no real gestures of assistance in the world."

Old Su, hearing this, shook his head seriously, his tone carrying a hint of complexity:

"Had you not intervened today, Zheng Ru would have surely died. Wang Lin, there's no need to be modest."

"It's just, I truly didn't expect... that an ailment of filth entering the body could be resolved with just garlic?"

Wang Lin, did any of your ancestors happen to be a renowned physician?"

"I wouldn't presume to call them that."

Xu Yun humbly waved his hand, replying:

"My great-great-grandfather was just a traveling doctor, and before his death, he passed down this remedy. All I know is that he was originally a Daoist, from a sect called Wind Spirit Moon Shadow Sect..."

Old Su blinked:

"Wind Spirit Moon Shadow Sect? So, an outsider."

During the late Song period, various folk sects abounded, with numerous sects and religious orders, not without some notable figures among them.

Such as in Bianjing at this time, there was a Daoist named Lin Lingsu who was extremely famous, known as the True Immortal in the World.

He was also one of the founding fathers of the later Shenxiao Sect and according to historical trajectory, would be recognized by Emperor Huizong of Song in a few years and appointed as a National Preceptor.

At his zenith, he held significant power, not even giving face to Cai Jing.

Thus, the concept of sects wasn't unfamiliar to Old Su, muttering the sect name twice before changing his line of questioning:

"Wang Lin, did your ancestor leave behind the principle of garlic juice dispelling diseases?"

Upon hearing this, Xu Yun's lips curled into a slight smile.

As expected, you would ask this.

But foreseeing is one thing, Xu Yun didn't plan to disclose the answer immediately.

After all, the value he intended to demonstrate was not just allicin:

"He did, but sir, right now Zhonghou is still not out of danger, shouldn't we first..."

Hearing this, Old Su was momentarily startled, then, somewhat sheepishly, slapped his forehead:

"Ashamed, truly ashamed, I was so intrigued I nearly neglected the important matter. Wang Lin, what should be done to treat Zheng Ru next?"

Xu Yun thought for a moment, then said:

"First, of course, is to prepare the allicin. To be honest, preparing allicin requires a special liquid, it isn't something you can make just by crushing garlic.

The garlic juice used on Zhonghou earlier included a product liquid that I carry with me and I have now run out.

If I am to prepare it again, I'll likely need some special equipment."

Old Su glanced at the container placed by Xu Yun beside the bed, contemplated for a few seconds before asking:

"Is it that liquid similar to strong liquor?"

Xu Yun nodded, secretly commending Old Su for his sharp thinking:

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

## **Chapter 134 120: The Drawbacks of Distillation.**

## (Thanks to Alliance Leader Divine Bird Ah Fei and Boss Wang Weihuahua!!)\_2

[ 945 words ]

"That's right, this substance is called ethanol, meaning the essence of alcohol, and its strength is significantly higher than regular spirits."

"What materials are needed to produce ethanol?"

Xu Yun continued:

"Two glass bottles, several bent copper pipes, these two things are indispensable.

Additionally, a large amount of white liquor, sodium bicarbonate, and extremely refined salt are needed.

Oh, and prepare a few sheets of asbestos as well."

Old Su picked up pen and paper from the table, noting down these names with a curious and puzzled expression:

"With just these, you can produce the ethanol you mentioned?"

Xu Yun nodded:

"That's right."

"What about the principle?"

"Distillation."

Distillation.

This term, in the 21st century, is a concept most middle school students are familiar with.

The concept of distilling ethanol is quite simple:

The boiling point of water is 100 degrees, and the boiling point of ethanol is 78 degrees. By utilizing the different boiling points, you can use distillation to obtain ethanol with a higher concentration.

That is, when alcohol and water are mixed, if you heat it to 80 degrees, the ethanol will boil, but the water won't.

The boiled ethanol condenses into another cup, and you can get a high-concentration ethanol solution.

However, while the concept sounds simple, putting it into practice is quite troublesome.

The specifics involve a small amount of chemical thermodynamics knowledge.

As is well known.

The critical point of temperature at which the first batch of bubbles begins to separate in a mixture's liquid phase is called the bubble point, while the critical point of temperature when the gas phase reaches saturation and a liquid phase appears is called the dew point.

At this point, some students might start feeling overwhelmed, but that's okay, the concept isn't important.

The important thing is.

The vapor-liquid equilibrium data of a binary mixture can be viewed through a binary phase diagram.

For instance, using ethanol's mass fraction as the horizontal axis and temperature as the vertical axis, a simple phase diagram coordinate system can be drawn.

As the temperature increases, the system enters the gas phase.

As the temperature decreases, the system will enter the liquid phase.

Assuming a 40-degree alcohol solution heated to ethanol's boiling point of  $T=78$  degrees, theoretically, the alcohol should evaporate by now, right?

But in practice, you'll find the system remains steadily in the liquid phase, with no boiling occurring.

At this point, you need to continue heating to a temperature between 78-100 degrees to reach the bubble point line, and then gas is generated.

However, to achieve vapor-liquid equilibrium here, it's apparent that the composition of the gas phase must meet the requirements, namely the corresponding point at the same temperature on the dew point line, and produce ethanol with a concentration of  $x_2$ .

Moreover, you'll find that as the purity of the alcohol increases, so does the required temperature.

Which means in the end, the evaporation temperatures of water and ethanol will nearly converge.

Thus, the ethanol purity that ordinary distillation can achieve is about 95% in practice, and in a historical setting, it might only reach 80%.

While this purity is sufficient for most scenarios, as a perfectionist, Xu Yun was obviously not satisfied.

This is why he proposed the next two things:

Sodium bicarbonate and refined salt.

With the help of these two items, the ethanol concentration can be further advanced, even reaching a level of 99.9%.

The focus returns to reality.

Considering the limited amount of allicin Xu Yun made the first time, even though Old Su felt like countless ants were crawling in his heart, he could only suppress his emotions temporarily and summon Mr. Xie, instructing him to prepare all kinds of materials.

And so.

Two hours passed in the blink of an eye.

When the time reached the hour of You, around seven o'clock in the evening, Mr. Xie finally gathered all the materials.

Anyone who has done distillation experiments should know.

The distillation process generally uses spherical flasks, but given the current special circumstances, it's impossible to find fully compliant equipment.

Mr. Xie almost utilized all the connections Old Su had during his tenure to gather a few glass bottles resembling spheres.

In contrast, the process related to copper pipes posed no difficulty, as Mr. Xie directly found several copper pipes from the mansion's storeroom.

Although Old Su was an honest official, his family still had considerable wealth, considering this was the Song Dynasty, after all.

Converting according to the earlier prices, Old Su's annual income was approximately equivalent to a post-tax 8 million in modern times, which would make him a high-income group even in Beijing, Shanghai, Guangzhou.

Subsequently, Xu Yun assembled a simple distillation apparatus from several items and poured the white liquor bought by Mr. Xie from Bianjing's first restaurant, Fan Building, into the flask.

Before the Yuan Dynasty, ancient Huaxia's liquors were mostly fermented, with strengths around ten degrees.

Some still had considerable grain residue, hence why they were called 'turbid wine.'

The few vats of liquor Mr. Xie bought back were roughly twenty degrees in concentration, made with fermented wheat starter, and could be considered the highest degree liquor currently available.

In short.....

Make do with this.

Once everything was ready.

Xu Yun placed an asbestos net and lit the furnace on a simply modified stove.

Old Su, much like a curious child, looked around the flask, tilting his head:

"Wang Lin, what's the point of placing asbestos at the bottom of the flask?"

While controlling the flame below—since in those days there was no such thing as a spirit lamp—Xu Yun explained to Old Su:

"It's mainly to prevent the distillation flask... these glass bottles from cracking due to uneven heating, by dispersing the heat."

Old Su nodded thoughtfully, then, after thinking for a while, moved to the other side of the stove.

He casually picked a pot, turned it over.

It could be clearly seen that the trace marks in the middle of the iron pot were much heavier than those on the edges.

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

## **Chapter 135 120 The Disadvantages of Distillation. (Thanks to Divine Bird Ah Fei and Boss Wang Wei huohua Alliance Leader!!)\_3**

[ 676 words ]

"Heat evenly... evenly..."

Looking at the pot in his hand, Old Su suddenly realized that there seemed to be a lot of knowledge in this world that he didn't know...

Two hours later.

The first batch of liquor was successfully distilled.

Xu Yun poured a small glass of the liquor and handed it to Old Su:

"Would you like to try it?"

Old Su took the glass with interest, first observing it in front of him for a while, then bringing it to his lips and taking a gentle sip.

A few seconds later, the little old man raised his eyebrows sharply:

"What strong liquor!"

Upon seeing this, Xu Yun nodded slightly.

The alcohol content of the first batch of distilled liquor could reach about 35 degrees, which was undoubtedly extremely strong liquor for people of this era.

Because it was distilled once, this kind of liquor was also called "Yiguaotou."

That's right.

Yiguaotou.

Many people might not know that Erguotou is not a brand; it actually refers to liquor from a second round of distillation, with an alcohol content between 56 and 63 degrees.

Useless knowledge increased again.jpg.

Xu Yun then took this batch of distilled liquor and processed it further, conducting a second round of distillation.

The second round of distillation took significantly longer than the first, taking a full half-hour to succeed.

Next was the third round...

One hour later.

Looking at the somewhat viscous liquid in front of him, Xu Yun shook his head slightly.

Perhaps due to insufficient equipment preparation, the alcohol concentration after three rounds of distillation only reached about 70%, showing a noticeable difference from 80%.

At this point, it basically meant that traditional distillation methods had reached their limit.

To further purify, one would either use carriers like benzene or use pressure swing distillation.

Or...

Use the prepared sodium bicarbonate and salt that Xu Yun had ready.

Sodium bicarbonate is basically baking soda, mainly composed of sodium bicarbonate.

It is easily soluble in water and slightly soluble in ethanol, easily forming monohydrate or decahydrate sodium bicarbonate.

The composition of salt is simpler.

Primarily sodium chloride, easily soluble in water and slightly soluble in ethanol.

This substance is commonly used as a drying agent in organic experiments to dehydrate solvents.

Xu Yun planned to first use sodium bicarbonate to remove water from the system, then use excess sodium chloride to remove any remaining water in the system.

In this way, the produced alcohol concentration wouldn't necessarily reach 99%, but 95% was still feasible.

Then Xu Yun added baking soda to the alcohol solution, and within a few minutes, a large amount of powdery precipitate appeared at the bottom.

Xu Yun filtered out this part of the precipitate, poured the solution into a new container, added salt, and stirred it to let it stand.

Twenty minutes later.

An extremely pungent smell emerged.

Being a bitter biologist, Xu Yun could basically determine that the target alcohol concentration was at least 95% the moment he smelled it.

Old Su, who was nearby, curiously took a small spoon, scooped some alcohol from the bottle, and bravely tasted a little.

As soon as it entered his mouth, he was choked into a fit of coughing.

After a while.

Old Su rubbed his still burning throat and said to Xu Yun:

"Wang Lin, the alcohol production is complete, so now we should make garlic juice for external application, right?"

However, to his surprise, Xu Yun shook his head:

"Sir, do you remember what I said at the beginning? To completely cure Zhonghou's illness, external application alone is not enough; other methods are necessary."

Old Su blinked and guessed:

"Not external application, so could it be oral administration?"

"Well... you might not know, but the effect of oral garlic extract is very poor, and alcohol would have a detrimental impact on the stomach, so external application is better."

"Then what should we do?"

"...Have you ever heard of intravenous injection?"

.....

Note:

Thanks to Divine Bird Ah Fei and Wang Weihua, the boss of the alliance!!

You guys can guess what the needle is, but I doubt anyone will guess it...

Some readers asked why it's a single update, do none of you read the word count...

In the previous book, I explained it. For a better reading experience, I'll combine some chapters, haven't you noticed the subscription price is different?

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

## **Chapter 136 121: Intravenous Injection Possible in Ancient Times (Still a Combined Chapter)**

[ 939 words ]

"Intravenous injection?"

Hearing this term from Xu Yun, Old Su blinked blankly:

"Wang Lin, what is that?"

Xu Yun thought for a moment and explained:

"Sir, whether it is a human body or an animal, there are pathways for transporting blood within, you should be aware of that, right?"

This time, Old Su didn't hesitate much and nodded:

"Indeed."

In ancient Huaxia or the concept of Chinese medicine, blood vessels and meridians are a point of contention that can easily lead to heated debates.

Chinese medicine has a standard definition for meridians, which is 'a few inches beneath the skin, can transmit air and blood'.

Therefore, some people think that 'meridian' means major blood vessels, and 'collateral' means capillaries.

Meridians and collaterals.

This is essentially the modern medical definition of blood vessels.

But some people hold a negative view on this.

They believe meridians are pathways for qi, invisible to the naked eye, just coincidentally overlapping with blood vessels in some places.

And when the issue of meridians extends, it easily leads to further debate about the existence of acupuncture points.

Acupuncture points, like meridians, currently have no solid proof of their existence.

This is one of the main reasons many people hold a negative view of Chinese medicine: if you can't find it, how can you claim it exists?

On the other hand.

In life, there are indeed some acupuncture points that one can feel the effectiveness of.

For example, Zusanli, Fengchi, Shaoshang, Hegu, etc.....

Often, when people feel unwell, pressing these points can quickly take effect.

Besides, in recent years, some results have emerged from studies on meridians.

For example, at the end of October 2021, Harvard University published a successful case of electrical acupuncture stimulation on the Zusanli point for treating sepsis in animals in Nature,

the paper code is [doi.org/10.1038/s41586-021-04001-4](https://doi.org/10.1038/s41586-021-04001-4).

In 2019, Science Advances also published a research report on acupuncture points, DOI: [10.1126/sciadv.aax1342](https://doi.org/10.1126/sciadv.aax1342).

All in all.

Currently, there is still no definite conclusion about the meridians and acupuncture points in Chinese medicine, and although studies have been conducted for over a decade, the specific locations of meridians remain undefined.

This is a fact and there's no need, nor can it be denied.

But at the same time.

The real effects of some acupuncture points are also quite obvious, which should not be overlooked.

Present scientific theory is still developing, with a long way to go.

To put it bluntly.

Even modern science cannot explain why a bicycle doesn't fall over once it's in motion.

Back then, the main issue of science even published a related paper, and the influence of this paper lasted nearly ten years, DOI:10.1126/science.1201959. (I'm not making this up, it's true; if you're interested, you can search it up)

Technological development and scientific explanations for certain phenomena are two different things; they cannot be generalized.

Let's return our gaze to reality.

Whether or not meridians exist, in the Inner Canon of the Yellow Emperor, the ancient ancestors had some insight into anatomy, which is recorded with concrete evidence; after all, you can see blood vessels when you slaughter a chicken.

Thus, when Xu Yun brought up the concept of blood vessels, Old Su easily accepted the idea.

Then Xu Yun paused and continued:

"Among them, veins are large-capacity vessels, specifically for collecting returning blood into the heart.

They complete systemic circulation... that is, the important pathway of the body's great circulation.

And intravenous injection refers to using special tools to inject diluted and prepared garlic juice into the human body.

Medicine thus directly reaches the affected area, yielding better results than oral and topical applications."

Hearing this, Old Su couldn't help but lower his head and feel the veins on his hand.

In modern medicine, injections are mainly subcutaneous, intravenous, and chicken... intramuscular injections.

Due to its chemical properties, garlic extract is not only ineffective when taken orally or with subcutaneous and intramuscular injections but can also easily harm the human body.

Thus, in modern medicine, the main injection method for garlic extract is essentially intravenous injection.

However, currently, there are not many garlic extract injections on the market, probably around three to five companies, with capsules still being the predominant form.

As an outstanding scientist of this era, Old Su naturally lacks neither creativity nor receptivity.

After receiving Xu Yun's suggestion, he quickly thought of some records.

He pondered for a moment and said:

"I remember that in the Records of the Three Kingdoms by Chen Shou of the Western Jin, there was an account of an unnamed doctor performing bone scraping to treat poison for Guan Gong.

In the Lingshu Chapter of the Inner Canon of the Yellow Emperor, there are also records of ancestors opening finger bones to apply medicine.

But injecting garlic juice into what you call the veins and reaching the affected area through the great circulation... This is something I've never heard of.

Xu Yun, let me ask you.

If medicines can indeed work by being injected into the body, then what would be used to achieve this?"

Xu Yun thought for a moment, gestured with his fingers:

"A long, thin, hard item, called a syringe."

Old Su was stunned immediately.

Long?

Thin?

Hard?

And makes a real poke?

Could it be that he heard it wrong before, and the process is actually called a stem vein injection, going through the perineum?

Real poke, stem vein, considering Xu Yun's background as a male actor...

Hiss!

Thinking of this.

Old Su began to look at Xu Yun with an unusual expression:

That Wind Spirit Moon Shadow sect, could it be from the Joyful Union Sect?

At this moment, Xu Yun did not notice the strangeness in Old Su's expression but took the pen and drew a simple diagram on the paper:

"This item is divided into the main body and the front needle, with the main body being about half an inch wide and half a foot long.

The front needle is only a few millimeters thick, hollow inside, with a pullable item on the main body.

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## **Chapter 137 121: Intravenous Injection Possible in Ancient Times (Still a Combined Chapter)\_2**

[ 1,377 words ]

"Once it's filled with liquid, you just need to insert it into a vein, slowly press, and then you can inject the garlic juice into the human body."

"Main body? Front needle?"

Listening to the drawings made by Xu Yun, Old Su was stunned again, only realizing that he might have misunderstood.

He awkwardly coughed lightly and looked at the drawing made by Xu Yun.

The Halo granted Xu Yun the ability to understand ancient texts after traveling through time, but it didn't enable him to master writing and drawing, so the sketch made with a brush had the charm of a 'soul artist'.

Although crude, some key details were described passably.

Actually, in ancient Huaxia, the ancients did attempt to create syringes.

However, the syringes of that time looked vastly different from those of later generations:

The 'tube' of the syringe was actually made of sheep bladders, with tubes made from animal intestines.

It was more akin to a squeezer for measuring blood pressure rather than a syringe.

This ancient syringe used bird bones, hollow inside, which facilitated the infusion process quite well.

Though slightly finer than the ancient handmade needles, using it was still excruciatingly painful.

In local history, the true concept of a modern syringe wasn't proposed until the 15th century by Italy's Caddenil.

It wasn't until 1853 that the Gaul Pula Waise invented the piston-type hypodermic syringe, made of pure silver.

Therefore, the syringe drawn by Xu Yun could be considered a new invention, quite ahead of its time for ancient people.

Most people might not even understand what it is.

But remember.

The principle of a syringe is actually very similar to that of an air pump, and Old Su is someone who can fiddle with self-priming pumps.

So within a few seconds, he clapped his hands lightly, grasping the operating principle:

"Marvelous, marvelous, drawing air in by pulling and then injecting it into the body using the momentum of crossing a hill..."

Such an ingenious creation, even if Hua Tuo and Bian Que were alive, they would be thrilled, wouldn't they?"

Students who elected to take a course on the history of ancient Huaxia physics should know.

Over the hill.

This term was actually the ancient rudimentary understanding of atmospheric pressure.

Though human knowledge of atmospheric pressure was shallow at the time, the concept of over the hill referred to valley winds.

Though, in strict terms, it's related to thermal circulation, not the broader atmospheric pressure.

Given the limitations of the background, recognizing this with the scientific level of the ancient era was already commendable.

At this point, Europe was still in the Middle Ages, and there, the understanding of wind was still the touch felt from the souls of the dead.

After some thought, Old Su said to Xu Yun:

"Wang Lin, I vaguely understand a bit about the principle of this object, crafting the tube is not difficult, but how should the needle be made?"

As you mentioned, the needle is only slightly thicker than a hair. If it were a solid needle, it wouldn't be difficult; I have silver needles of this kind in my hand.

But if it's hollow inside..."

Seeing the curious expression of Old Su, Xu Yun smiled softly at him:

"Sir, are you familiar with sea urchins?"

"Sea urchins?"

Old Su was momentarily stunned, blinking quickly:

"Is that the sea creature covered in spines? I've seen it a few times..."

Wait, I understand now, are you planning to use its spines to make the needle?"

Xu Yun nodded emphatically:

"That's right, exactly that."

The sea urchin, known to later generations.

Sea urchins can be found throughout the global ocean, visible in both Asia and Africa.

In recent years, sea urchins have appeared in cuisine both in our country and in other countries.

In the words of some gourmets, sea urchins are crowned as the supreme delicacy among seafood.

However, in ancient Huaxia, sea urchins were merely used as medicinal ingredients and not as a common food.

Only extremely poor fishermen would consume sea urchins when food was scarce.

Many people didn't know this.

Sea urchins have existed on Earth even before the emergence of dinosaurs, their history is quite ancient.

Of course.

They differ somewhat from cockroaches.

Currently, sea urchins generally fall into five categories:

Sh\*t sea urchin, purple sea urchin, northern purple sea urchin, red sea urchin, and long spine sea urchin.

The sh\*t sea urchin and purple sea urchin are considered common, long spine sea urchin grows fastest, and red sea urchin is the least seen in the market.

Additionally, what many people do not know is...

Sea urchin spines are actually a natural type of needle.

Or more accurately.

The spines of red sea urchins are a natural type of needle.

The spines of sea urchins are columnar protrusions formed after the calcification of connective tissues, connected to the body's venom glands, and can very easily pierce human skin.

When a spine pierces the skin and injects venom, it can cause dermatitis and other associated symptoms.

Every year, a large number of "how to deal with sea urchin stings" questions appear online, especially in some coastal cities.

In later generations, most medical needles range from size 5.5 to 7 with diameters between 0.30mm and 0.51mm.

While the tip of a red sea urchin spine is about 0.38mm to 0.42mm, fitting the standards for intravenous injection.

So, in ancient times when the technology to create sharp hollow needles was not available, sea urchin spines were undoubtedly the best choice.

Although red sea urchins are primarily found in Neon, maritime trade in the Song Dynasty was quite prosperous, and by the Southern Song period, it even became one of its key industries.

In those years, many maritime merchant fleets regularly traveled between Korea and Danluo, and although there were fewer fishing boats, these journeys occasionally brought rare sea goods back to the Great Song.

Bianjing, as the core city of the Song Dynasty, had a level of blood supply... ahem, on par with the support Hebei provided to Yanjing in later generations.

So just by putting in some effort to find them, obtaining some red sea urchins wasn't difficult.

Of course.

The spines of sea urchins are easily able to pierce the human epidermis, but they are also extremely fragile and can break into pieces with a little force.

So, before the formal injection, two more tasks need to be taken care of:

Finding the red sea urchin, plating the 'needle' with aluminum to strengthen it, and preparing saline solution.

Exactly.

Saline solution.

After all, unlike oral and topical applications, intravenous injection doesn't mean just pouring the liquid into the tube and directly injecting it into the bloodstream.

Before intravenous injection, the liquid must be integrated into diluent or infusion fluid, then the next step of injection can proceed.

The principle is simple, it relates to osmotic pressure:

Human blood isn't simply pure water; it contains various substances, thus having a certain osmotic pressure.

If osmotic pressure changes, it can cause an imbalance inside and outside the blood cells, leading to cell rupture.

The solution used for infusions, 0.9% sodium chloride, has an osmotic pressure close to that of blood, and such a solution ensures no significant change in blood osmotic pressure.

Similarly, there's the 5% glucose solution, which biology teachers have probably lectured on countless times in class.

Under certain circumstances, coconut water can serve this same purpose.

Additionally, in the movie "Who Am I," after a driver gets bitten by a venomous snake, Uncle Long uses coconut water instead of glucose for infusion treatment.

In his past life, Xu Yun once asked a writer friend known by the pen name Bai Yi Xue Shi... White Robe Scholar about this when writing a book.

This person, in reality, was also about to reach a director-level position as a doctor.

Highly skilled in medicine, but with a high hairline.

In Xu Yun's writer group, people would often seek his advice, getting a free director's consultation.

At the time, he told Xu Yun.

Examples of using coconut water after snake bites have been noted in movies, but actual intravenous injections are not as simple as just pouring medication into a tube and injecting it into the veins.

Although intravenous injection isn't merely pouring the solution into the tube and injecting it into the bloodstream directly.

The rationale is straightforward, related to osmotic pressure:

The 5% glucose solution is another similar solution, as mentioned in class, that maintains osmolarity.

In emergencies, physiological saline is regarded as the best measure.

Of course.

The materials required for this part can be thought of in many ways.

For example, as long as you have hands...

Rub your hands to generate electricity...

It seems I underestimated everyone, I'm glad I didn't arrange an extra reward.

...

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

## **Chapter 138 122 "The Story of Me Making Generators in the Great Song" (Major Chapter!!)**

[ 929 words ]

Little known.

In ancient Huaxia, the purification of salt had always been a troublesome affair.

In the most primitive tribal eras, humans initially relied on eating raw flesh and blood to obtain salt.

After entering the era of civilization,

the ancestors found salt wells and thus gained methods for processing crude salt.

By the Tang and Song periods, fine salt refined from sea salt gradually appeared and was quite expensive.

The highest price even reached a pound... or rather sixteen taels and ninety wen.

But the term 'fine salt' here is actually a concept compared to earlier crude salt.

Compared to the standard table salt of later generations, the fine salt of this period still contained many impurities.

Such as sulfate ions, magnesium ions, calcium ions, etc...

Especially magnesium ions.

This stuff, when entering the human body, could cause diarrhea, heart function disorders, and other anomalies.

For Wang Yue at this time, it was practically a deadly substance, and injecting it was essentially murder.

Earlier, to preserve Wang Yue's life, Xu Yun could only temporarily cope with fine salt.

After all, efficiency comes first.

Moreover, the purpose of adding table salt was merely to dehydrate ethanol and increase the alcohol concentration, leaving minimal residues in the human body.

But now, with physiological saline injections, it can be foreseen that this will be an extremely long-term treatment.

Thus, these impurities become somewhat troublesome.

Therefore, purifying sodium chloride has become a necessary and urgent step.

Indeed.

There are many methods to purify sodium chloride.

For instance, using seashells, coconut shells, or any acidic fruit can do the trick.

But don't forget.

Xu Yun came to this era with a task to complete.

The stronger the ability he showcased now, the easier it would be to gain Old Su's trust.

Coupled with the factors of the era, he also needed a certain status to do some things — whether he succeeds in the end is one thing, having a say is another.

So, after careful consideration, he decided to hand-build a generator and use electrolysis to prepare sodium chloride.

Having made up his mind.

Xu Yun pondered for a moment, then said to Old Su:

"Sir, intravenous injections require something called physiological saline, which needs to be made by another method.

Therefore, may I trouble you, sir, to prepare some materials for this humble one?"

"What do you need?"

"...These things might be a bit expensive."

Upon hearing this, Old Su grandly flicked his sleeve:

"Zheng Ru's life is at stake, and my family is wealthy; just say what you need."

Only then did Xu Yun nod and flip to the other side of the paper with the strange symbols.

He began to write down the needed materials:

"A piece of natural magnet, best shaped like this...

Then process the fine copper into thin wires, the longer the better... along with two copper blocks and several copper plates...

Also need a half-meter iron shaft, wooden molds, tung oil, a turntable, graphite, Poisonous Heavy Stone, and the water supply equipment in the mansion...

Send someone to the Sour Plum Shop on the east side of the city to ask the owner if they have any white stuff that can produce ice; if so, buy some back...

Oh, and prepare the donkey used for grinding."

After describing the requirements, Xu Yun handed the paper to Old Su.

This time, he was preparing to make a standard disc generator, the principle being Faraday's electromagnetic induction phenomenon.

Or simply put, generating electricity through magnetism.

The iron shaft forms the rotor core, copper wires soaked in tung oil are wound around it as windings, and the magnet acts as the stator.

An operation that can be done by hand.

What?

Are you asking about the voltage issue?

$U = k B \omega n V$ , voltage equals the coefficient times the magnetic strength times the effective length of the rotor times the number of coil turns times the difference in rotational speed, which can all be pre-calculated.

Meanwhile, the precision of the copper wire only needs to be five millimeters, which even the industrial standards of ancient times could easily meet.

Throughout the entire process, the biggest problem isn't technology or craftsmanship, but the cost of production.

According to Xu Yun's design.

The generator's base cost would be over 200 guan of copper coins, equivalent to two hundred taels of silver, with potential increases at any time.

Converting this based on the previously mentioned concept is roughly equivalent to 200,000 in later eras.

And these generators, without voltage regulators and distribution devices, could do very little in ancient times.

To put it bluntly, this thing is practically burning money.

So if you time-travel to an ordinary family, you'd probably get a beating from your parents before you even fiddle with the generator...

However, at this point, to treat Wang Yue, Old Su obviously would not be too concerned.

After getting Xu Yun's blueprint, he immediately summoned Mr. Xie, the Old Chief Steward.

He had this head steward work overtime at night.

Xu Yun then rubbed his somewhat sore neck, bid farewell to Old Su, and returned to his small room to sleep.

A lot happened today, exhausting him both mentally and physically.

And since there was no Tifa in this era, naturally, he could only obediently sleep.

He slept through the night without incident.

....

The next morning early.

A faint voice suddenly reached Xu Yun's ears:

"Mr. Wang, Mr. Wang, it's time to get up....."

Xu Yun yawned and rubbed his drowsy eyes.

After coming to his senses, he suddenly felt something was amiss:

In past days, although someone would also call him to wake up, the commotion was mostly rough.

Either banging on the door or shouting, unlike today's gentle tone.

Then he put on his clothes and opened the door.

At this moment, he saw.

Yongzhu was standing outside with a slightly timid smile, holding a basin of water in his hands, showing none of the casualness of yesterday when he casually called him 'Wang Mazi':

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

## **Chapter 139 122 "The Story of Me Making Generators in the Great Song" (Major Chapter!!) \_2**

[ 943 words ]

"Mr. Wang, you're awake. Please have some water."

Xu Yun looked at him somewhat strangely and asked:

"Brother Yongzhu, what is this..."

"No, no, no, calling me that will humble me. Just call me Pillar."

Hearing the three words "Brother Yongzhu," Yongzhu shivered instantly and quickly said:

"Mr. Wang, you might not know.

The master issued an order yesterday to remove you from the servitude register and add you to the guest roster in the mansion.

Now you are considered a guest, different from us servants, so feel free to order me if you need anything."

"A guest?"

Upon hearing this, Xu Yun was taken aback, then understood.

A guest.

Also known as a diner, is a unique group in ancient times.

Most of them were Jianghu wanderers or strategists, without official positions, and some were even fugitives.

They were usually provided for by the master and would assist the master when necessary.

Back in the day, Lord Meng Chang was said to have three thousand diners, and in Water Margin, Chai Jin's manor also hosted a large number of guests.

In essence, guests belong to the 'honored,' which is much higher than 'servants.'

For example, Zheng Kuan, one of the four giants at Old Su's mansion, the hospital guard leader, is a kind of 'honored.'

Therefore, his salary and status are much higher than even the highest class 'Yi' servants.

However, they have a lesser degree of intimacy with the master compared to Elder Xie and Yue Lian, each with its strengths and weaknesses.

If Xu Yun remembers correctly,

Old Su had also recruited dozens of guests before his retirement, and according to records, some parts of the Water Transporting Celestial Observation Platform were completed by guests.

But now that Old Su is retired, the number of guests remaining in the mansion is probably not many.

The empty East Wing also supports this, as that is the guest room, theoretically where guests should be accommodated.

So, aside from the essential hospital guard position, there might only be one or two guests left for accounting purposes.

In all, the number is likely less than three.

Truly as rare as a unicorn's horn.

To be honest.

Whether as honored or servant.

Xu Yun, coming from later times, does not have high expectations for status, so he naturally wouldn't boss others around.

He first had Yongzhu bring the water into the room, took a towel to wash his face, and then said to Yongzhu:

"Brother Yongzhu... hey, don't rush, Brother Yongzhu, let me talk first.

Back then, you were the one who pulled me out of the well with a rope, so there's no need for formalities and ranks between us.

How about this, if you think well of me, I'll still call you Brother Yongzhu.

As for me... you can call me Brother Wang, just like you call the Third Brother, how about it?"

In the Song Dynasty, 'brother' was not used to refer to an elder brother; it was more of a somewhat intimate commoner term.

To illustrate with Water Margin again:

In the segment where Wu Song angrily kills Pan Jinlian, the young boy selling pears in Yanggu County was called Yun Ge'Er, a minor character with a bit of involvement.

Seeing Xu Yun's words seemingly genuine and recalling their shared experience at the Sour Plum Shop, Yongzhu felt a bit of camaraderie with Xu Yun.

So he hesitated for a moment but eventually ventured to say:

"Then I will call you... Brother Wang?"

Xu Yun laughed heartily:

"Sure!"

After finishing his washing, he went to the breakfast stall to have a simple breakfast.

Then he headed to the East Wing and met Old Su and the three, Wang Bing and Wang Yue.

As expected.

After some back and forth, he finally persuaded Old Su and Wang Bing to change his address from 'Mr. Wang' to 'Xiaowang.'

As for Xu Yun's address for Old Su, it remained as 'master,' since guests are also considered subordinates.

Then Old Su told Xu Yun,

that in the middle of the night yesterday he noticed Wang Yue had a slight fever, and since Xu Yun had mentioned that allicin is difficult to store, he used the remaining allicin on Wang Yue.

The illness was stabilized, and it also marked the depletion of the first batch of allicin.

Thus, Xu Yun's goal today was clear:

To complete the mass production of the second batch of allicin and allicin injection solution!

Then Old Su led Xu Yun to another courtyard in the East Wing, where a pile of materials awaited him in the courtyard.

Hmm.

And the donkey.

Upon entering the courtyard,

Old Su pointed to the items and introduced them:

"Xiaowang, here we have natural magnets, iron axes, and wooden molds.

The copper wire was crafted overnight by the craftsmen at the Artifact Bureau. See if it fits your needs.

Also, as you mentioned,

the Sour Plum Shop does have some white crystals for making ice, and some were bought back during the First Year.

Oh, by the way, the water transfer device you mentioned has also been prepared; it's the pile on the left."

Xu Yun nodded slightly, first walking over to inspect the precision and specifications of the copper wire.

Ancient times didn't have insulating varnish for perfect insulation of the wire.

But in special situations, parchment and tung oil can be used as substitutes.

When Faraday first experimented, he used parchment too.

The theoretical limit for homemade generator copper wire is five millimeters, about the width of half a fingernail, the thinner, the better below this value.

The specifications of the copper wire Old Su prepared are roughly around two millimeters, consistent with his earlier accounts, claimed to be crafted overnight by craftsmen from the Artifact Bureau.

In other words,

in this era, outside of the extensive time required for delicate craftsmanship.

The processing precision of rapid mass production through official industrial measures is about two millimeters.

Xu Yun quietly noted this information, then turned to the self-priming pump that had been disassembled beside him.

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## **Chapter 140 122 "The Story of Me Making Generators in the Great Song" (Major Chapter!!)\_3**

[ 741 words ]

Indeed.

Just as he had anticipated earlier,

this self-priming pump, although not as refined as those of later generations, still clearly reveals the principle of the pump's operation, along with...

Breguet balance spring and the mainspring.

Xu Yun bent down and weighed the main joint of the self-priming pump in his hand.

About fifteen or sixteen pounds.

Then he turned his head, holding the self-priming pump, and asked Old Su:

"Master, what might this be...?"

Upon hearing the words, Old Su stroked his beard, a trace of pride appearing on his face, as this was indeed his masterpiece:

"This object is called an Absorbing Surge, a small gadget discovered by chance when I was ordered to build the Water Transporting Celestial Observation Platform years ago.

By simply using the wheel junction to store power, it can deliver water dozens of yards away, matching the work of several servants making multiple trips."

Xu Yun was silent for a moment, then bowed to Old Su:

"Its technique is close to divine."

This remark had no flattery but was a sincere admiration.

Though the principle of the Breguet balance spring and self-priming pump seems very simple in later generations.

But in the current era—or rather, until the 17th century, this was a cognitive barrier for humanity. (Note: This isn't me fantasizing. The Celestial Balance system devised by Old Su is the prototype of later mechanical watches, a recognized achievement domestically and abroad. Where there is a mechanical watch, there has to be a Breguet balance spring. This achievement is attributed mainly to Hook due to the antiquity and lack of physical evidence.)

This might be the wisdom of Huaxia's ancestors.....

After sighing in admiration, Xu Yun refocused on the reality.

He began by inspecting various devices one by one and then formally started assembling the generator.

As everyone knows.

A direct current generator mainly consists of two parts: the stator and the rotor.

The main components of the stator are the machine base, main magnetic pole, commutating pole, end cover, and brushes, etc.

The primary role is to generate a magnetic field.

The main components of the rotor are the armature core, armature winding, commutator, shaft, bearings, fan, etc.

The primary role is to generate induced electromotive force and electromagnetic torque, which is the core of energy conversion for a direct current generator.

Of course.

If crossing time, a simple apparatus suffices without being so complicated.

The actual components essentially needed are the stator main magnetic pole, armature core, armature winding, commutator, and shaft.

The basic principle of a direct current generator is Faraday's law of electromagnetic induction:

If a conductor cuts magnetic lines of force, an induced electromotive force will be generated in the conductor.

High school physics teachers should have demonstrated it, so there's no need to elaborate here.

Normally speaking.

This ancient generator needs to be powered by hand-cranking, somewhat akin to using a pencil sharpener in elementary school, and the faster, the better.

But don't forget.

Xu Yun currently has the good thing called the mainspring in his possession:

Just letting a donkey store energy in the mainspring and then using a very simple torque for conversion can turn the elastic potential energy of the mainspring into kinetic energy, getting the generator running.

Whether the donkey gets tired is not something Xu Yun is worried about.

Next, Xu Yun wound the copper wire onto the Copper Plate and attached a turntable below, securing the Magnet on a specially made stand.

Then, he mounted the coil between the Magnet, connecting the lead ends to form a closed circuit, using graphite as a brush for conduction.

And just like that.

A simple generator was completed.

Yes, just that simple,

Actually, many seemingly sophisticated knowledge of later times was not difficult to replicate in ancient times, the main difficulties being twofold:

One is its derivative application and storage, electrical appliances are far harder than a simple generator.

The other is the process of recognizing the concept.

Just like power generation.

Don't even mention Xu Yun's disk engine; in extremely extreme cases, you could generate power using two fruits.

Ubisoft's server is just like that.

Ancient people couldn't harness electricity not due to insufficient industrial level but largely due to their unfamiliarity with the microscopic realm:

They didn't even grasp the concept of electrical energy.

Like Old Su at this moment.

During Xu Yun's assembly process, he remained almost entirely silent because he couldn't understand at all what Xu Yun was doing.

Xu Yun also didn't bother to explain, as seeing the phenomenon followed by the explanation of some concepts is far easier than teaching the ideology.

After fiddling with the generator, Xu Yun did not rush to start it.

Because he had another task to do:

Preparing electrolysis.

.....

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

## **Chapter 141 123: The Song Dynasty Also Needs to Kill Cockroaches**

[ 959 words ]

In the 21st century.

Compared to hand-cranked generators, the concept of electrolysis might be more widely disseminated.

Especially the electrolysis of saturated saltwater, which is a fundamental chemical practical reaction.

In electrolysis experiments, the cathode undergoes a reduction reaction, gaining electrons.

The anode, on the other hand, undergoes an oxidation reaction, losing electrons.

Simultaneously, after the electrolysis reaction occurs, some active metal's non-oxygenated acid salt will generate a base at the cathode.

While the non-active metal's oxygen-containing acid salt will generate acid at the anode.

Additionally, after the electrolysis reaction, the cathode will also produce solids and reducing gases.

As for the choice between cathode and anode...

A common operation for the electrolysis of saturated saltwater is using copper as the cathode and carbon rods as the anode.

Of course.

If conditions are general, actually two carbon rods won't have much impact.

However, the electrolysis of saturated saltwater has a rather special aspect, which is that chlorine gas easily reacts with sodium hydroxide.

Namely,  $2\text{NaOH} + \text{Cl}_2 = \text{NaCl} + \text{NaClO} + \text{H}_2\text{O}$ .

Therefore, in modern industry, a permeable diaphragm is commonly used to separate the anode chamber from the cathode chamber, preventing them from contacting each other.

However, in the current Great Song, achieving such a technique is clearly impossible, therefore Xu Yun considered.....

A salt bridge.

In the courtyard.

After preparing the generator materials, Xu Yun turned around and asked Old Su:

"Master, do you know where the white crystals bought from the Sour Plum Shop are?"

Old Su pointed to a package on the left and replied:

"That package over there, Xiaowang, if my judgment isn't wrong, this should be saltpeter?"

Xu Yun walked over to open the package, examined it carefully, and confidently said:

"Yes, it indeed is saltpeter.

I heard that old man speak with a He Xi accent, so these saltpeter must have been transported from He Xi."

Old Su nodded thoughtfully and said:

"I see, no wonder when Mr. Xie came back in the First Year he told me that the couple initially thought he was a spy sent by a competitor and even threatened to report to the authorities.

Later, he had to show the Commandery Prince's Mansion's badge and invited a government official from the street as proof before they were willing to sell him some of the crystals, and the price wasn't low."

Xu Yun was quite satisfied as he shook the saltpeter in his hand and said:

"For saltpeter of such quality, it's normal to be expensive, it saves a lot of trouble."

Previously, upon seeing ice-cold sour plum juice in the Sour Plum Shop, Xu Yun had thought of two possibilities for the old man's ice-making.

One is an ice cellar.

The other is saltpeter.

The likelihood of an ice cellar isn't very high, after all, in this era, the cost to build an ice cellar isn't low, only large families and estates would use ice cellars to store ice cubes.

Therefore, although Xu Yun couldn't be sure the other party definitely had saltpeter, he was about seventy percent confident.

And with saltpeter, he could prepare potassium nitrate.

Students who didn't fail biology should remember.

Potassium nitrate is a common salt bridge.

A so-called salt bridge refers to something that can connect the electrolytes in two beakers, allowing ions to move freely from cathode to anode.

With a potassium nitrate salt bridge, it can maximally prevent the chlorine gas and sodium hydroxide produced in electrolyzed saltwater from reacting in the electrolysis cell, thereby promoting the production of chlorine gas.

As for the preparation of potassium nitrate, it's quite simple:

First, dissolve the saltpeter in water to remove sand and mud.

Heat, evaporate, and concentrate, then cool to obtain  $\text{KNO}_3$  crystals.

Potassium nitrate crystals have extremely high solubility, so by dissolving these crystals in water again, a salt bridge is thus formed.

After many preparatory tasks are completed.

Xu Yun put the refined salt prepared by Mr. Xie into the water and started stirring with a glass rod.

Soon.

The solution began to become somewhat turbid.

Xu Yun looked at Old Su:

"Master, could you please fetch the gauze?"

Though Old Su didn't quite understand Xu Yun's intentions, he still handed him a funnel with gauze over it.

Rustle—

Xu Yun poured down the turbid solution.

With the barrier of the gauze, some insoluble impurities were filtered out.

Next, he divided the filtered solution into two large cups, let's temporarily call them Cup A and Cup B.

Hmm.

Just cups, not shield characters.

Then he first connected Cup A to the electrolysis equipment— the setup wasn't much different from modern equipment for the electrolysis of saturated saltwater, where the anode had a conduit leading to another container of water.

At this time, the donkey had already accumulated power for the mainspring, and as Xu Yun flipped the switch, the rotor began to spin rapidly.

The prepared solution had a volume of about one liter, and based on the Nernst equation, the theoretical voltage value for successful electrolysis was calculated to be 13V.

Thus, the effective turns of the generator he designed were 17 turns.

Of course.

Xu Yun preset the rotor slot number as 2, with a rotation speed of 300 rounds per minute, and the calculated accurate value was 15.7, so theoretically it should be 16 turns.

However, considering the ancient copper wire and conduction effects, he still chose to wrap an extra turn, just to be safe.

After all, a voltage of less than 30 volts in electrolysis generally doesn't pose any issues.

After all preparations were completed, Cup A began electrolysis.

Although at this time there were still many impurities in the solution, such as magnesium chloride and sodium sulfate, making the solution seem impure.

Xu Yun's main focus in this operation was gas collection, as sodium chloride was the primary component of the solution, and other anions wouldn't affect it at all.

A side note here.

This concept seems easy to understand, but it specifically involves concepts of overpotential and Gibbs free energy.

Just like a piece of knowledge everyone knows from middle school:

Electrolysis of dilute sulfuric acid is equivalent to electrolysis of water.

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

## Chapter 142 142: 123 Zhang Song Dynasty also wants to kill cockroaches\_2

[ 1,118 words ]

But in the professional...or rather university field, this statement is actually wrong.

Because in the high school realm, the discharge order of hydroxide ions in water comes before oxyanions, so oxyanions cannot discharge.

However, in reality, due to the existence of overpotential, a side reaction that generates  $\text{H}_2\text{S}_2\text{O}_8$  will occur, exceeding the standard electrode potential of 2.01V, forming an overpotential situation.

Therefore, the electrolysis of dilute sulfuric acid is actually somewhat different from that of water.

Returning to the original place.

With the input of electrical energy, the sodium chloride in cup A was quickly electrolyzed.

Hydrogen gas is generated at the cathode.

Chlorine gas is generated at the anode.

These generated gases escaped and were collected by a glass conduit into a container placed in the dark, out of sight.

Chlorine gas at the bottom, hydrogen gas at the top.

When ignited, white mist forms at the mouth of the bottle. (Not recommended to try it, it's prone to explosion)

This white mist was then led by a glass tube into another water-filled container, dissolving in the water.

As a result.

A high-concentration hydrochloric acid was prepared.

Reading up to here, some students might ask:

No, isn't it enough to directly dissolve chlorine gas in water to get hydrochloric acid? Why go through all this trouble?

The reason is simple:

Chlorine gas generated by electrolysis can also be dissolved in water to obtain hydrochloric acid, but this reaction actually produces a chlorine-water mixed solution.

Besides hydrochloric acid, it also contains  $\text{Cl}_2$ ,  $\text{H}_2\text{O}$ ,  $\text{HClO}$ ,  $\text{H}^+$ ,  $\text{ClO}^-$ ,  $\text{Cl}^-$ ,  $\text{OH}^-$  and various other ions.

Not only is the reaction reversible, but the concentration of hydrochloric acid is also very low.

The effectiveness is much worse than the hydrochloric acid prepared by Xu Yun.

Of course.

Again, a reminder not to easily react chlorine gas with hydrogen, or explosions can easily occur.

Returning sight to the original place.

After the operation was completed, Xu Yun filled the hydrochloric acid into different containers.

Looking at Old Su beside him, he did not rush to the next step, but instead asked Old Su:

"Master, can you find someone to catch some cockroaches?"

"Cockroaches? Why do you need those?"

"I have my own use for them."

Old Su had seen a lot of Xu Yun's strange operations today, so he did not question further. He glanced at Mr. Xie beside him and instructed:

"First Year, quickly find someone to catch some cockroaches."

Mr. Xie nodded and turned to arrange for manpower.

As mentioned a long time ago.

Cockroaches have existed on Earth for hundreds of millions of years, their history is older than that of dinosaurs, and can even be considered one of the longest-existing creatures on Earth.

Coupled with the fact that the hygiene standards during the Song Dynasty were much lower than those of later generations, and it was summer, cockroaches were naturally seen everywhere.

Thus, not long after, Mr. Xie returned holding a glass bottle:

"Master, Brother Wang, the cockroaches have been caught."

Xu Yun took the glass bottle and immediately smiled.

Good fellows.

Again, it's the American cockroach, the old standby.

At this moment, these American cockroaches were thrashing about in the bottle, evidently Old Su's family had good food.

Then Xu Yun laid the glass bottle flat, signaling Old Su to step aside a bit.

He opened the bottle, picked up hydrochloric acid and poured it in.

Normally, hydrochloric acid is very corrosive to living organisms, but killing them is difficult.

However, cockroaches are quite special:

Their surface contains a protein called tiec, and hydrochloric acid ranks first among acids in terms of corrosiveness and destructiveness to this protein, with a significant lead over the second.

Therefore, hydrochloric acid is also a very effective cockroach extermination substance.

Pa la—

As hydrochloric acid was poured.

The cockroaches first panicked and crawled around the bottle.

But soon, their surface was corroded by hydrochloric acid, creating breaks.

In just a few minutes, these unlucky fellows finally.....

Suffocated and died.

Annihilated Family American Cockroach.JPG.

Seeing this situation.

Old Su's pupils suddenly shrank, exclaiming in horror:

"How...how is this possible? Is salt actually poisonous?"

Seeing this, Xu Yun smiled slightly, saying nothing.

Old Su's reaction was within his expectations, or to put it plainly, it was also one of his purposes:

In the ancient times, with near-zero microscopic cognition, nothing was more impactful than extracting 'highly toxic' substances from the table salt consumed every day.

Once he completed what he was doing, Old Su would inevitably ask him some questions.

And without exception, these questions would be relevant to the microscopic field.

Having such an example happening right before their eyes makes some words obviously more convincing.

Then Xu Yun collected the prepared hydrochloric acid and picked up another item Old Xu had prepared:

Poisonous Heavy Stone.

Poisonous Heavy Stone is a barium-containing ore, often used in later industrial processes for acid-leaching to prepare barium chloride.

Xu Yun took the ground-up Poisonous Heavy Stone, washed it clean, picked up a small spoon, and added it to the hydrochloric acid solution.

Half an hour later.

A mixed solution had been successfully prepared.

Xu Yun then started adding sodium hydroxide to it—one of the products of the previous electrolysis, although it contained other cations, they were already the target products, so they wouldn't affect the reaction process at all.

Wanting every link to be seamlessly connected took a lot of Xu Yun's effort.

As everyone knows.

In the Poisonous Heavy Stone solution, the pH for complete precipitation of Fe<sup>3+</sup> is 3.2, for Mg<sup>2+</sup> is 11.1, and for Ca<sup>2+</sup> is 13.9. (Refer to paper 10.16283/j.cnki.hgkwyjg.1996.06.014)

Thus, Xu Yun didn't need to care about the real-time data of pH value, just observing the precipitous changes in the reaction process was enough.

Another hour passed.

After dropwise addition of sodium hydroxide and filtration.

A standard barium chloride solution was formed.

At this step, the rest is simple, which is.....

The purification of crude salt, a junior high school concept.

First, add excess BaCl<sub>2</sub> to remove sulfate ions.

The reaction formula is BaCl<sub>2</sub>+Na<sub>2</sub>SO<sub>4</sub>=BaSO<sub>4</sub>↓+2NaCl.

Then, add excess NaOH to remove magnesium ions:

MgCl<sub>2</sub>+2NaOH=Mg(OH)<sub>2</sub>↓+2NaCl

The third step is to add soda, which is sodium carbonate.

This stuff is omnipresent in the glass-making industry, and its purpose is to remove calcium ions and barium ions in BaCl<sub>2</sub>.

Finally, add HCl to remove excess NaOH, Na<sub>2</sub>CO<sub>3</sub>—this process, if conditions permit, can be observed with pH paper for the amount of hydrochloric acid, if not, just pour and evaporate the excess.

Then, another hour passed.

A large cluster of precipitated sodium chloride crystals came out.

Xu Yun measured the dose, dissolved them in water.

Just like that.

A standard concentration saline officially arrived in the year 1100.

On the other side.

Watching Xu Yun, who was engrossed in configuring the garlic injection, Old Su finally couldn't hold back:

"Xiaowang, why does the salt undergo this kind of treatment and become such a highly toxic substance?"

.....

Note:

I don't know if anyone would ask why making salt needs to be so complicated. Here's the thing, it wasn't just to make salt....

In order to fit the later plot, you wouldn't know how exhausted I was writing this.....ahem, disturbing my friends.....

Begging for a monthly pass, as there are additional activities for monthly pass...

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

## **Chapter 143 124: The Microscopic World Beginning with Electrolysis**

[ 1,813 words ]

"Xiaowang, why does saltwater produce such a toxic substance after being processed this way?"

In the courtyard.

Facing Old Su's question, Xu Yun immediately felt a sense of solemnity.

It had finally happened.

This was the situation he had anticipated beforehand, and it was the purpose of his visit today.

In fact, not only Old Su, but anyone from ancient times who witnessed the previous scene would undoubtedly feel puzzled.

Xu Yun then took a deep breath, and instead of directly explaining the concept, he asked:

"Sir, have you ever read the 'Essential Hundred One Rituals of the Abhidharma of the Sarvastivada School' translated by Master Sanzang Yijing?"

Mentioning Master Sanzang, many people might think of Xuanzang's bald head in Water Margin.

However, in reality, Master Sanzang, like Professor Lucas previously introduced, is a kind of "title."

It refers to a master in Buddhism skilled in the Tripitaka, and Yijing was one of the lesser-known ones.

But at the moment, the founder of the Shenxiao Sect, Lin Lingsu, was still in his rising fame phase, quite a distance from the historical peak period of Buddhism repression.

Moreover, since the Tang and Song periods didn't span long, Old Su had heard of this work by Yijing:

"Indeed."

"Then do you remember a sentence from the book?"

"Which sentence?"

"When Ayu and Anilu scrutinized the water with a divine eye, they clearly observed in the..."

Before Xu Yun finished his words, Old Su instinctively continued:

"...saw countless beings within the water."

Xu Yun nodded, secretly relieved.

It was good that Old Su knew this sentence.

He then gathered his thoughts and continued:

"Sir, have you ever considered..."

that in the world we reside in, whether it's the air, objects, or even the blood in the human body, there are also countless beings?

Or to put it simply.....

all visible matter is actually composed of tiny particles?"

"Particles?"

Old Su, hearing this, was first stunned.

He seemed somewhat confused.

But soon, he understood Xu Yun's meaning.

In an instant, Old Su felt a tingling sensation climbing from his tailbone straight to his head.

He instinctively lowered his head to look at his arm.

Due to the decline of blood and energy with age, the veins on his hands were visibly prominent.

As a distinguished physician, Old Su naturally understood.

In these veins flowed the blood of the human body.

But according to Xu Yun...

Could it be that in this blood, there are also myriad beings?

Or particles?

This... how could this be possible?

This concept already touched upon one's worldview, and Old Su instinctively wanted to refute it.

But recalling Xu Yun's previous actions, he merely opened his mouth and did not speak.

Seeing Old Su as if he had countless things to say but didn't know how to start, Xu Yun couldn't help but feel empathetic.

Currently, it is the year 1100 AD, over five hundred years before the microscopic world would be discovered by genuine scientific instruments.

And even further from the time when microscopic theory would be systematically compiled, at least seven or eight hundred years away.

Therefore, he understood very well.

The impact of what he said to Old Su had been nothing short of earth-shattering.

Of course.

With the opening of a Buddhist verse, the impact of this topic had already been minimized.

In later generations, when discussing the microscopic world, many would often cite another Buddhist verse:

"In a bowl of water, the Buddha perceives 84,000 creatures."

However, this sentence would only be recorded by the Duti lawyer in "Vinaya Daily Digest" in the Ming Dynasty, so for now, Xu Yun could only quote from the "Essential Hundred One Rituals of the Abhidharma of the Sarvastivada School."

This book title contained more characters, which was quite nice.

Then Xu Yun observed Old Su, and when he saw him recovering from the shock, he continued:

"Sir, according to the notes of the Wind Spirit Moon Shadow Sect, all things in the world are made up of even smaller particles.

These particles are called molecules, and molecules are made up of atoms, which are the smallest things in the world.

Thus, it can also be said that everything in the world is composed of atoms."

Old Su repeated:

"Atom? Molecule?"

Xu Yun nodded and pointed to the remaining coarse salt solution in front of them:

"For example, saline water is composed of sodium chloride molecules and water molecules.

It contains chlorine, sodium, oxygen, and hydrogen atoms.

When chlorine atoms combine with hydrogen atoms, they form hydrogen chloride gas, which dissolves in water to form what we see as hydrochloric acid."

To be honest.

Looking through the eyes of future generations, Xu Yun's explanation wasn't particularly rigorous.

In later times, the hierarchy of matter from largest to smallest would look something like this:

The entire universe could be broken down into galaxy clusters and galaxies.

Galaxies could be broken down into planets, which could be broken down into molecules and atoms.

Molecules could be broken down into atoms.

Atoms could be broken down into atomic nuclei and electrons.

Atomic nuclei could be broken down into protons and neutrons.

Protons and neutrons could (theoretically) be broken down into quarks.

In current theory and technology, the focus has reached the quark level, with 62 "fundamental" particles such as quarks, leptons, and gluons, among which photons are somewhat more special.

Therefore, Xu Yun's correct statement should be 'Sodium chloride is an ionic compound, formed by a sodium ion and a chloride ion through an ionic bond'.

For instance, when mentioning chemical properties, it's more accurate to describe sodium, chlorine, hydrogen, and oxygen as elements.

However, for Old Su as a beginner, the urgent matter is to establish a micro-level understanding as soon as possible, so the subdivision of substances is not that important:

Explaining ions, protons, and atomic numbers to him doesn't really have much significance.

Sometimes using academic imprecision to facilitate the understanding of knowledge can actually be a good thing.

Saying this, Xu Yun pretended to grab a handful of air and said to Old Su:

"Actually, it's not just solutions. For example, in our air, there are gas molecules formed by oxygen atoms and carbon atoms.

These are the things that cannot be seen or touched.

When these particles are inhaled into the human body, some of them provide the energy necessary for our survival."

Old Su also grabbed a handful of air, looked at his empty palm, and suddenly thought of something.

He turned to Xu Yun and recited:

"A rod one foot long, halved each day, inexhaustible through the ages?"

Upon hearing this, Xu Yun was initially stunned, then his eyes widened in shock, and he gasped.

Goodness.

How terrifyingly fast Old Su's rate of acceptance is!

If Old Su were born in later times, he would probably be a super, super genius too.

A rod one foot long, halved each day, inexhaustible through the ages.

This phrase comes from 'Zhuangzi: All Under Heaven'.

Actually.

The original meaning of this phrase is Zhuangzi mocking Hui Shi, saying he likes to create strange theories through sophistry.

But the understanding of this phrase in later generations gradually deviated, seeing it as a query into the ultimate origin of the world:

A one-foot-long stick, if half is taken away each day, is it not endless?

It's also worth mentioning.

The later generations here don't refer to the 21st century, but to the feudal dynasty period, roughly from the early Tang to the late Ming.

It's very clear.

This phrase involves a certain concept of microelements—especially in this current context, the meaning of Old Su quoting it is self-explanatory.

Separated by nearly a thousand years... or rather, by a complete scientific theoretical system, this was already the most suitable sentence that Old Su could find.

It's like a middle school student who only knows basic algorithms, trying to leap into learning Maxwell's Equations.

The two are clearly separated by insurmountable barriers, yet that middle school student somehow found a generalized solution to a linear set.

Then Old Su tapped Xu Yun's experiment table with his finger, the stone table making a dull sound:

"Xiaowang, according to what you say, is this stone table also composed of molecules?"

Xu Yun nodded, affirming:

"That's correct, its molecules are called calcium carbonate and silicon dioxide, consisting of calcium atoms, carbon atoms, oxygen atoms, and silicon atoms."

Old Su blinked, noticing a term, and asked curiously:

"Xiaowang, if I recall correctly...

In the three examples you mentioned, it seems that the term oxygen atom was mentioned?"

Xu Yun, already accustomed to Old Su's acuity, nodded again succinctly:

"That's right, oxygen and carbon atoms are among the most common atoms in nature, so they naturally appear more frequently."

Old Su nodded slightly, and just as Xu Yun thought he was about to ask more about particle structure, the topic suddenly shifted:

"Xiaowang, then according to you, is Zheng Ru's illness also caused by molecules or atoms?"

Xu Yun was unexpectedly stunned for a few seconds, then after regaining his composure and a moment of silence:

"Zhonghou's illness... Although it can also be said to be related to atoms, the more accurate term would be...

bacterial infection."

"Bacteria?"

Xu Yun took a deep breath and explained:

"Master, do you remember the phrase I mentioned earlier? In the air, there are also countless living beings.

This is not an exaggeration; in fact, there are numerous tiny organisms in the air that are difficult to see with the naked eye.

In the journals of the Wind Spirit Moon Shadow sect, they are referred to as microorganisms.

Some of these microorganisms benefit the human body, some are neutral, while others are extremely harmful.

For example, Zhonghou's illness is a severe condition caused by Escherichia coli, saprophytic staphylococci, and gram-positive bacteria, leading to bacteremia and sepsis.

When these microorganisms entered Zhonghou's body, they infused his blood with a large number of toxins.

These toxins circulated throughout the body from the wound, which led to his severe coma."

Similar to earlier discussions on the micro-particle structure of matter.

Xu Yun's explanation of microorganisms was also somewhat generalized:

He temporarily omitted the key distinguishing point of cellular structure, directly categorizing the properties of bacteria and viruses together, with the purpose of helping Old Su understand.

Perhaps due to the foundational discussion of material microparticles earlier.

After Xu Yun made these statements that contradicted the views of this era, Old Su's reaction was not so startled.

After all, he is a quasi-authoritative doctor, and his understanding of the concept of 'microorganisms' somewhat aligns relatively.

After all, traditional Chinese medicine often describes many illnesses starting with 'feeling', such as the commonly heard 'evil/negative/turbid energy entering the body', etc.

Traditional Chinese medicine considers any factor causing a malfunction in the normal operation of the body's functions as 'evil'.

Wind-cold is cold evil, and phthisis is infectious evil.

In fact, the character for 'epidemic' already explains a lot.

However, to avoid conflict, let's keep it conservative.

Not to call it a micro concept, at the very least, it can be considered a judgment on the source of disease, which should not be objectionable, right?

This is a relatively primitive understanding, so Old Su found it quite easy to understand the explanation of 'microorganisms'.

However, understanding does not equate to accepting this concept. Old Su's nature clearly isn't one that accepts things without skeptical thinking.

He contemplated for a while and then asked:

"Whether atoms or microorganisms.

These things are undoubtedly invisible to the mortal eye. How did you come to know of their existence?"

Xu Yun was silent for a moment, then suddenly smiled:

"Master, have you ever heard of a microscope?"

.....

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## **Chapter 144 125 "The Story of Me Creating a Generator and Then Crafting a Microscope in the Great Song**

[ 1,014 words ]

Although in the past day.

Xu Yun had already proven that he indeed possessed some unusual skills with considerable practical value.

But perhaps due to ingrained notions.

Whenever a fresh term came out of Xu Yun's mouth, Old Su instinctively thought of Xu Yun's identity as a male actor.

After all, the roles of a male actor and someone with ancestral medical skills don't really conflict much.

In these times, bloodline notoriety is quite common, with countless examples of parents rising to prominence while their children end up in prison or in brothels.

Thus, Old Su easily associated certain terms with being a male actor.

Who told Xu Yun to only verbalize the pronunciation rather than directly write the Chinese characters? ☆\*。٩(‘〇`\*)و☆\*。

For instance, the real poke.

For instance, stem injection.

And for this time.....

"Micros-take?"

Then Old Su imagined a scenario in his mind.

Hiss...

Of course.

This whimsical thought came and went quickly.

The next second, Old Su realized that what Xu Yun was referring to was most likely some new tool.

Even though it was unknown how many times Old Su had heard new things from Xu Yun's mouth, he still looked quite curious:

"Xiaowang, I wonder what kind of object this microscope is that you are talking about?"

Xu Yun thought for a moment and asked:

"Master, have you ever heard of Ai Dai?"

Upon hearing this, Old Su was stunned, then his eyes showed a contemplative look, his expression somewhat nostalgic:

"Of course, I've seen it. In the past, when Duke Wen Zhong could still see clearly, someone presented this item.

I heard Duke Wen Zhong praise its wonder more than once, but unfortunately, later Duke Wen Zhong developed an eye ailment, and the Ai Dai eventually lost its purpose."

Xu Yun nodded knowingly, he had also heard about what Old Su was talking about.

Ai Dai.

The term might sound a bit twisted, but the object it refers to is quite common, it is the later era's...

Reading glasses.

That's right.

During the Song Dynasty, reading glasses had already appeared.

For example, in the Southern Song Zhao Xihu's "Grotto Heaven Clear Record," there is a clear documentation:

"Ai Dai, when the elderly cannot distinguish fine books, they use this to cover the eyes, and then can see clearly."

Additionally, in the Song Dynasty's "Leisure Diary," there's another example provided:

"Shi Hang resolved cases, took dozens of pieces of rock crystal to use initially unbeknownst, but later discovered the case documents were dim, and used rock crystal to see them clearly."

Rock crystal, that is, crystal.

Shi Hang was a fellow countryman and friend of Su Xun of the Northern Song, who developed presbyopia when serving as a law enforcement officer, thus he used crystal glasses to read case files.

However, the eyeglasses at this time were not shaped like the framed dual-lens glasses we are familiar with today.

According to descriptions.

Ancient reading glasses should be a single lens, without the existence of a frame.

They needed to be hand-held when used, somewhat similar to how magnifying glasses are used.

As for the Duke Wen Zhong mentioned by Old Su, it naturally refers to Ouyang Wenzhong, who is one of the Eight Great Prose Masters of the Tang and Song, Ouyang Xiu.

He was also a good friend of Old Su, who was deeply affected by vision impairment in his later years, having passed away about thirty years ago.

On a side note.

There was also a very famous person with poor eyesight in ancient times, named Bai Juyi.

He even wrote a poem about it:

In early years diligently watching the suffering of reading, in old age mourning shed many tears.

The eyes damaged not knowing self-possession, fell ill only then understanding what to wish for.

At night it seemed like the lamp would extinguish, in morning darkness long suspected the mirror was not polished.

Thousands of medicines and countless prescriptions could not cure it, one should close the eyes and follow the recluse.

From this, it could be seen.

Old Bai not only had nearsightedness, but most likely also astigmatism and dry eyes....

Returning our attention to the present.

With the example of Ai Dai, these ancient reading glasses, explaining the concept of a microscope became easier for Xu Yun:

"A microscope, as the name suggests, is a 'mirror' that can display tiny objects in view.

If the Ai Dai is said to magnify a character several times.

Then a microscope could magnify small objects tens, hundreds, or even thousands of times.

With this microscope, microorganisms naturally wouldn't be able to escape unnoticed and would be observable."

Old Su silently listened to these words, his expression thoughtful.

Truth be told.

Xu Yun's logic had no particular problems, merely relying on magnification to explore minute objects.

In fact, many years before Xu Yun appeared, Old Su had already pondered the possibility of using crystal to make magnifying devices.

After all, in the "New Astronomical Instrument Manual," Old Su personally drew 14 star maps, recording 1464 stars.

This is also the earliest star map preserved domestically from the complete collection of star maps later on.

Europe didn't expand their star maps to 1022 stars until the 14th century Renaissance, and even then with some basic constellations recorded.

Not only later by two hundred years than Old Su, but also fewer in quantity than Old Su's by a large margin.

Of course.

Another set of star maps with 1350 stars, the Tang Dynasty Dunhuang Star Map, predated Su Song's star maps.

But unfortunately.

It was stolen over a hundred years ago by Stein and is now kept in the British Museum in London, so it does not count as a star map preserved within the country. (This is also an infuriating matter. Those interested can look it up. Back when I saw some documents in the British Museum, I had extremely mixed feelings....)

As a contemporary master who once gazed at the stars, Old Su naturally also thought about whether it was possible to use the magnifying effect of crystal to observe the stars.

For example, in Old Su's study, there is currently a simplified telescope stored.

However, its magnification is only five or six times, with magnification effects almost as good as nonexistent, not making much visible.

The collector value is instead higher than practical value by a bit.

But with these objects and past experiences as a basis, Old Su, upon hearing Xu Yun's introduction, grew more and more interested:

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## Chapter 145 125 "About the Things I Did in the Great Song After Inventing a Generator and Then Crafting a Microscope by Hand"\_2

[ 1,249 words ]

"Xiaowang, I can barely understand your explanation, and there's not much issue with the inference, but I'm not sure if the microscope..."

Xu Yun blinked and quickly understood Old Su's intention:

"Sir, are you asking...if a microscope can be made?"

"Indeed."

Xu Yun paused for a moment and continued:

"It isn't too difficult to make a simple microscope. It's rumored that within the Wind Spirit Moon Shadow sect, this belongs to extremely simple technology, as long as you have hands, that's enough.

However, just like syringes and generators, making a microscope also requires spending some money and effort on materials..."

Upon hearing this, Old Su hurriedly asked:

"Xiaowang, what items are needed?"

Xu Yun thought for a moment and named a few items:

"Firstly, of course, you need glass, and not just any glass.

One type needs to be made from volcanic mineral, and the other requires a unique silvery-gray clay from the Western Jiangnan Dao.....

Then there are various items like glue, wood, nails, and so on.

Also, some of the alcohol prepared earlier is needed."

DIY microscope.

In the tech hobbyist community of future generations, this is considered a very simple task.

Of course.

This refers to the optical microscope.

Students whose biology teacher didn't die of frustration should know.

The principle of the microscope is actually quite simple; put bluntly, it's just five words:

Convex lens imaging.

The structure of the microscope mainly consists of the eyepiece, objective lens, stage, and reflector.

Both the eyepiece and the objective lens are convex lenses, with different focal lengths.

Moreover, the focal length of the objective lens should be less than that of the eyepiece.

The objective lens is akin to the lens of a projector, forming an inverted, magnified real image of the object.

The eyepiece is akin to an ordinary magnifying glass, through which the real image becomes an upright, magnified virtual image.

Therefore, the image of the object viewed through a microscope to the human eye is an inverted, magnified virtual image.

The reflector is used to illuminate the object being observed, generally having two reflective surfaces:

One is a plane mirror, used when the light is strong.

The other is a concave mirror, used when the light is weak, which can converge light.

As for the magnification of the microscope, it's also straightforward; the value of the eyepiece X the objective lens is the magnification.

Currently, the maximum magnification of an optical microscope is 1600 times, and those claiming optical microscopes can magnify tens of thousands of times are just bluffing.....

This magnification limit involves the diffraction limit, where a point light source forms a diffraction spot.

At this magnification, regardless of increasing the lens's refractive index or stacking lenses to increase magnification, it will become meaningless—at least within the realm of optical microscopes.

Of course.

Speaking of microscopes, one must mention its inventor.

This person, like the American cockroach, is an old background character.

Exactly!

This person is none other than...

Robert Hooke.

In fact.

According to later research, the person who truly thought of the microscope's working principle and invented the first microscope should be the Janssen father and son in 1595.

But these two unfortunate souls didn't use these instruments for any significant observations and did nothing after making them, then just died.

Thus, in historical records, the invention rights of the microscope became a battleground between two other people:

Levin Hook and Robert Hooke.

The confusion between these two is so high that even the biology textbooks made mistakes.

Let's first define it by the time point:

In terms of microscopes, Robert Hooke's invention was twenty years earlier than Levin Hook's.

However, the magnification of Hooke's microscope was only 20 times, while Hooke's was up to 270 times.

Therefore, the correct saying should be that Hooke invented the microscope, and Hooke invented...or rather improved the high magnification microscope.

Additionally, in terms of biological contributions, Hooke discovered cells, but what he observed were slices of cork.

Hooke magnified and found small compartments, which he named with the English word 'cell'.

But in reality.

What he observed were dead cells, merely the remaining plant cell walls.

Whereas Levin Hook observed living microbial bacteria, thus he is considered the founder of microbiology.

This is akin to both Hooke and Hooke tinkering with a time machine, with Hooke traveling 4 million years back and discovering a creature's skeleton, naming it a dinosaur.

Hooke's technology was slightly better, traveling 65 million years back and seeing real, living dinosaurs.

The latter's discovery is obviously more complete, but due to the former's earlier discovery, the discoverer of dinosaurs remained as the former.

In short.

Hooke discovered the cell wall and named the cell.

Hooke discovered bacteria, observed the complete cell structure, and thus defined microorganisms.

Meanwhile, the former invented the microscope.

The latter invented the high magnification microscope.

This is the historical truth that even biology books can't clarify.

Returning our focus back.

According to Xu Yun's design, the entire DIY process of the microscope has two key points:

First is to ensure the objective lens images at the eyepiece's object focal point, specifically calculated using  $f'(x) = \frac{1}{3}$ .

The second is the magnification issue.

The first person in the world to discover the optical microscope's limit magnification was Ernst Abbe, who invented the 1500 magnification optical microscope in 1874.

The resolution is about 200 nanometers, which is half the shortest visible light wavelength.

Therefore, creating an optical microscope by hand doesn't actually require much assistance from modern equipment.

As a tech enthusiast who has handmade two-digit microscopes, Xu Yun is naturally aware of one thing:

In ancient society, there are two types of materials that can perfectly achieve the combination of refractive and dispersion indices.

These are crown glass and flint glass.

In the 21st century, crown glass was basically tied together with Zeiss lenses.

But actually.

It is a type of glass with an Abbe number greater than 50, also known as lanthanide glass.

The local lanthanide mine sites are primarily in Inner Mongolia and Jiangxi, which are the Western Jiangnan Dao of the Tang Dynasty and the West Jiangnan Road of the Song Dynasty, and in later eras, where chili water would flow from the tap.

Combined with the distinctive properties of lanthanide rare earths, it shouldn't be hard for Old Su to find them.

As for volcanic glass, it's even simpler.

As the name suggests.

It's a type of mineral product found in volcanic craters.

Although there's a slightly troublesome aspect to these two, in that if not handled properly, they might retain some scary radioactive elements like thorium.

But if the process is done properly, all of these can be avoided easily.

Once the raw materials are gathered, through a series of techniques like stirring glass solutions and plano-convex lenses, superb achromatic lenses can be prepared.

By then, although not reaching the extreme magnification, at least a magnification of 900 times shouldn't be difficult.

During the observation with a microscope, a low magnification lens of 100 can view red blood cells, while 400 times can see more clearly.

To see the detailed structure of bacteria, a 1000 times lens is needed, which has a small field of view and requires agents to expand it.

Additionally, staining is needed; otherwise, the shadow of the bacteria can't be seen.

Therefore, a 900 times microscope is already a very practical instrument.

To put it bluntly.

Such a magnification microscope, Old Su might not discover all its uses until the day he dies.

Of course.

Considering the relatively special raw materials of the microscope, even just transporting them is quite troublesome.

Xu Yun conservatively estimated that it's already fortunate for the materials to be ready within a week.

Hence, the specific manual process has to be postponed for a while, to be discussed later.

More importantly.

There is another matter to prioritize right now.

Which is...

Wang Yue's intravenous injection.

After all, if the garlic extract solution isn't injected soon, it's hard to say when Old Su might kick the bucket.

This Lord Middle Marquis might really be in trouble.....

....

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

## Chapter 146 126: The 1st Ancient Case of Intravenous Injection

[ 995 words ]

Although not long ago, Xu Yun had already managed to control Wang Yue's injury through external application, this was just a temporary measure.

If we must put it that way.

This was merely using the special effects of garlic extract in combination with Wang Yue, whose resistance to medication was practically zero, to achieve a high-efficiency but short-term effect.

In other words, the proverbial 'hanging by a thread'.

The first batch of garlic juice prepared by Xu Yun had already run out, so intravenous injection became the urgent task.

However, considering that the red sea urchin used to make needles wasn't a common ingredient—or rather, a medicine of this era—it required a trip to the major pharmacies and markets in Bianjing City to find it, so it was unlikely to find the actual item today.

Therefore, Xu Yun could only prepare some garlic extract solution and continued to prolong Wang Yue's life through external application.

After doing all this, taking advantage of the time, he started tinkering with the needle's plating.

Which was...

Silver.

Actually.

Initially, Xu Yun planned to use aluminum for the needle plating.

But according to the normal historical timeline, aluminum wouldn't be officially produced until 1827, and before that metal aluminum was quite rare.

It wasn't that Xu Yun couldn't continue doing it manually, but rather that the process of making metal aluminum was very tedious, even more complex than combining a microscope and generator.

Clearly, Wang Yue's condition couldn't be delayed for that long, so Xu Yun ultimately decided to use silver to prepare the plating solution.

As long as the plating solution ensured that the top part of the sea urchin's spine wasn't broken by the elasticity when pierced into the skin.

Even if some silver did enter the body through an opening, such a dose wouldn't pose any threat to the human body at all.

At most, it would cause some protein denaturation around the wound, making the scab appear darker.

The melting point of silver is 961 degrees, which is a temperature range that can be easily achieved even in ancient times, so the preparation isn't difficult.

Therefore, Xu Yun didn't show off much, he just made a simple small furnace that looked like a coal kiln out of clay, using pressure to increase the melting efficiency, ensuring the silver block could turn into a liquid as soon as possible.

As for the silver used for the plating solution...

Of course, it was drawn from Old Su.

Having prepared these.

Xu Yun left the site in the care of a servant and went to move house himself.

That's right.

Move house.

Mentioned earlier.

Xu Yun has now been registered in the guest roster, completely left the status of a slave, and became a standard 'guest'.

Therefore, his residence naturally changed from the South Wing to the East Wing, which can be considered an ancient version of a promotion and raise.

Compared to the simple South Wing, the East Wing's room was much better.

For example, the room Xu Yun was assigned to was about twenty meters away from the courtyard where Wang Yue stayed, a small independent courtyard.

Not to mention, the courtyard alone spanned about thirty square meters.

In the center of the courtyard was a large willow tree, providing an extremely refreshing shade.

To the left of the willow tree was a small pond about ten feet square, with a few fish swimming leisurely inside.

To the right of the willow tree was a grape trellis, with a recliner underneath—the kind known as a old-fashioned chair these days.

When the sun sets, you can have the servant cut a few pieces of fruit and brew a pot of scented tea.

Leaning leisurely on the chair while watching the night view is quite delightful.

Beyond this.

The decorations inside this room were also much better than those in the South Wing's room.

For instance, there was a writing desk, inkstone, and incense burners inside, and even the bedside was adorned with various intricate carvings.

On this particular day.

Xu Yun not only created a generator by hand but also tinkered with electrolysis, using the corrosiveness of hydrochloric acid to open Old Su's eyes to the microscopic world.

His physical strength was still manageable, but the exhaustion of his energy was considerable.

And by the time he finished moving, it was already the hour of Xu, which is after eight o'clock in modern time.

So after having a simple dinner, Xu Yun lay down on the bed and fell into a deep sleep.

It was another silent night.

.....

Perhaps it was because of the good bed, but Xu Yun had a solid sleep and was awoken naturally the next day.

That's right, today no one called him to get up.

"Ha....."

At around seven or eight in the morning.

Xu Yun stretched lazily and woke up leisurely.

Then he got up, and put on new clothes—the clothes that Old Su had ordered people to tailor for him yesterday, a low-key and common gray color style.

However, the fabric was countless times better than his previous blue attire.

After dressing.

Xu Yun walked to the sink by the door and turned a switch similar to a faucet.

In less than a moment.

Rushing sound——

A stream of cool well water gushed out, gradually filling the basin.

Xu Yun washed his face with this water, opened the door, intending to find Old Su.

He had only taken a few steps.

When a somewhat timid and familiar voice reached his ears:

"Brother Wang..."

Xu Yun looked in the direction and saw another familiar face standing outside his door:

"Oh, it's Third Brother?"

Indeed.

The visitor was Zhang San.

From the title this little boy used, it wasn't hard to guess that Yongzhu had likely explained a few things to him.

Then Xu Yun quickened his pace and went to Zhang San's side, unabashedly patting his somewhat dusty shoulder:

"Third Brother, where have you been running off to these days? I haven't seen you around."

Seeing Xu Yun treating him the same as before, Zhang San's expression gradually relaxed.

Of course.

He was still a bit reserved, but not to the absurd extent of a pathetic barrier:

"My sister's child reached the full month yesterday, so I went to help my brother-in-law's family prepare some matters, hence I took a few days off..."

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## **Chapter 147 126: The 1st Ancient Case of Intravenous Injection\_2**

[ 835 words ]

"Brother Wang, I heard you earned favor and did something commendable in front of the master, and suddenly moved to the East Garden?"

Xu Yun nodded towards him and hummed a response.

Zhang San, being childlike by nature, hadn't seen what Xu Yun had done over the past two days.

So it wasn't surprising.

The "commendable act" he mentioned was likely gossip picked up from other servants.

After all, just days ago, Xu Yun had been a little thief fished out of the water, and then became a lowly servant, a complete ordinary unlucky soul.

Yet within a week.

He transformed into Old Su's esteemed guest, and those servants would normally refer to him as "Mr. Wang" now.

Aside from young ones like Zhang San, most servants must be inwardly bitter, making bitter remarks.

Then Xu Yun smiled and said to Zhang San:

"It was just good luck. Regardless of being a guest or a servant, we're all working for the master, aren't we?"

"No, no, no, it's not the same."

Upon hearing Xu Yun's words, Zhang San shook his head seriously and counted on his fingers:

"Not talking about the Old Chief Steward or Sister Yue Lian, regular servants' monthly pay is only four to six coins, and that's close to the limit.

But the guest stipends are different.

I heard that guests start at at least ten coins, some even get twenty or thirty.

A guest's monthly work equals our five months!"

Looking at this boy who talked about monthly pay since their first meeting, Xu Yun laughingly ruffled his hair, teasing:

"Since that's the case, when the opportunity arises, I'll teach you a few tricks, so you can become a guest too, how about it?"

Xu Yun felt quite destined with Zhang San, and their personalities matched well.

If there's a chance, teaching him some means to "change fate" wouldn't be bad.

Unexpectedly, Zhang San sneaked a glance at Xu Yun's lower half, quickly shook his head:

"No need, no need, being a servant is good for me, oh right, hurry to have breakfast, the master seems to be looking for you....."

As he spoke, Zhang San's expression grew peculiar:

"Seems like something you wanted has been bought, something that can poke and shoot....."

Xu Yun wasn't aware of Zhang San's expression, focusing completely on his words:

"Wow, they found Red Sea Urchin in one night? That's too fast!"

Originally, Xu Yun thought Red Sea Urchin was rarely found inland and might only be found near Deng Prefecture.

Including travel time, it should take at least three days.

How should I put it...

Old Su, being once a Prime Minister, was indeed resourceful.

Even after retiring for three years, he still had quite sharp methods.

He must have used some extraordinary connections to locate the Red Sea Urchin that Xu Yun needed so quickly.

Morning meals in the East Wing were purchased by specific people early, without sharing with the servants.

Thus, after padding his stomach, Xu Yun headed to the courtyard where he crafted the electric generator yesterday.

At this moment.

The generator and electrolytic cell Xu Yun made yesterday were placed in a corner, and a simple high-temperature furnace he built was bubbling with melting silver—the melting point of iron is 1536 degrees, about six hundred degrees higher than silver, no need to worry about the iron pot melting accidentally.

Old Su stood next to the generator, seemingly studying something.

Perhaps too engrossed, he didn't notice Xu Yun entering the courtyard.

Seeing this, Xu Yun gestured silence to Zhang San, then approached Old Su alone and spoke:

"Master, sorry for keeping you waiting, are you...?"

Upon hearing, Old Su raised his head and nodded slightly at seeing Xu Yun:

"Oh, Xiaowang is here, I am researching the generator you created."

Seeing Old Su's leisurely expression, Xu Yun knew Wang Yue's condition was likely stable, so he proactively followed up:

"Master, have you discovered anything?"

"Can't quite say discovered, but gained a little insight."

Old Su gestured with his chin towards the generator, saying:

"I observed this object for quite some time and noticed several details, let me tell you, see if I'm correct."

Xu Yun promptly made a listening posture.

Old Su pointed at the generator's stator and said:

"Firstly, this circuit connects head and tail into a loop.

I once tried moving the coal block, and found the generator cannot operate.

Thus I deduced.

For this item to work, it must first be a connected closed loop."

He paused, ignoring Xu Yun's expression, and continued:

"Secondly, the direction question.

Look here, the two magnetic poles oppose each other.

If as you said, everything in the world can be divided into particles.

Then the particles between the poles must move laterally by attraction.

But the direction of the internal rotating object is very strange:

While it rotates, different positions contact the magnetic pole 'particles' every moment, like rubbing...

Combining earlier when you had the donkey pull and pump, I made a second uncertain judgment...

Which is your mentioned 'electric energy', actually the power generated by donkey's grinding, and born through internal rotating object's 'friction'..."

In the courtyard.

Looking at Old Su, speaking eloquently.

Xu Yun appeared outwardly calm, yet couldn't help the storm inside.

Although Old Su's explanation had many inadequacies, in future physics class it would probably be punished to stand in the back row.

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## Chapter 148 126: The 1st Ancient Case of Intravenous Injection\_3

[ 851 words ]

But don't forget.

This is the year 1100 AD.

A feudal era that didn't even have a standard understanding of electricity.

Old Su was able to make such a judgment by observing a generator; he's really amazing, huh!

Although Old Su was still far from truly understanding the principles of magnetism generating electricity.

His words basically summarized the two key elements of electromagnetism:

Closed circuit, the angle between the direction of conductor movement and the direction of the magnetic field lines is not zero.

Apart from here.

Old Su's last sentence pinpointed the essence of magnetism generating electricity:

Magnetic power generation is electricity transfer, converting kinetic energy into electrical energy, causing electrons to move closer or farther.

Coulomb's force works to generate an induced current in the conductor.

If Xu Yun had to evaluate, Old Su is simply a.....

Monster!

That's right, a monster!

He then took a deep breath and said to Old Su:

"Sir, your analysis is very close to the truth of the generator, but the specific concept involves something called a current. Since Lord Middle Marquis is still ill, should we first..."

Old Su lifted his eyelids and gave him a glance, then pondered for a moment and asked:

"Xiaowang, are you very familiar with current?"

"Just a little, just a little."

Old Su nodded slightly, noted it in his heart, and then said:

"If that's the case, then let's first perform a venous injection for Zheng Ru. See if the box over there contains what you're looking for, the 'prickly basket'?"

Xu Yun looked accordingly.

He discovered that Old Su was pointing at a wooden water box about 30 centimeters high.

He then walked to the water box and found several red sea urchins quietly resting at the bottom.

As a biology PhD and Japanese cuisine enthusiast, Xu Yun immediately recognized the species of these sea urchins upon seeing them:

No doubt about it.

They were indeed Red Sea Urchins!

With the species confirmed, the rest was simple:

He first took one of the Red Sea Urchin spines, cleaned and disinfected it with alcohol, and then applied molten silver water on the surface.

Then, during the time the silver water was solidifying, he took out 120 milligrams of pre-prepared garlic ethanol solution, mixed it with 1000ml of saline, and stirred it well.

Just like that.

A simple garlic injection solution was prepared.

After about a quarter of an hour.

The silver water had solidified completely.

Xu Yun then took a silver syringe from Old Su—this device was made by Old Su according to the diagram provided, featuring a small locking switch at the interface.

Xu Yun opened the switch and inserted the needle tip from the top of the tube.

Angled to the liquid, the needle tip was formed into an oblique conical shape.

Hence, when the needle tip emerged from the bottom about 90% of the way, the rest, which was too large to pass through, remained inside the tube.

Xu Yun closed the latch to secure the needle tip completely.

Thus.

A silver-made ancient syringe was finished.

Having completed these, Xu Yun followed Old Su into the room.

At this moment, Wang Yue was still asleep, but both his complexion and breathing made it clear that the Lord Middle Marquis was out of danger.

One could even hear slight snoring, clearly dreaming sweet dreams.

Seeing Xu Yun and Old Su enter, Wang Bing, who had been keeping watch beside the bed, quickly got up and cupped his hands toward the two:

"Uncle, Xiaowang, you're here."

Xu Yun returned the courtesy, then shook the needle in his hand and said:

"Captain, the injection solution is ready, may we proceed with the injection now?"

Wang Bing immediately stepped aside, as his trust in Xu Yun had reached a considerable level:

"Please do."

Xu Yun stepped forward and first conducted a simple skin test on Wang Yue.

Twenty minutes later.

There was no abnormal reaction at Wang Yue's test site.

In other words, the skin test was negative, indicating no allergy.

Seeing this, Xu Yun glanced at Old Su and Wang Bing:

"Sir, Captain, the body of Lord Middle Marquis can accept the venous injection, then.... shall I begin?"

Old Su nodded:

"Go ahead."

Upon hearing this, Xu Yun took a deep breath, drew the medication into the syringe, and expelled the air.

At the same time, he tied a makeshift tourniquet to Wang Yue, taking hold of his left hand.

Locating the vein, he started the slow push injection.

With ease, the Red Sea Urchin's spine pierced through Wang Yue's skin and entered the blood vessel.

Xu Yun pushed the injection very slowly, being extremely cautious throughout.

After a few minutes.

Upon completing the garlic solution injection, Xu Yun's expression remained tense.

He knew that now was the most perilous moment.

While intravenous injections enable antibiotics to take effect quickly, they also entail considerable risk.

For instance, there could be infusion reactions, or excessive medication particles might cause local blockages and insufficient blood supply.

Further leading to tissue hypoxia, edema, phlebitis, and so on...

The single advantage Wang Yue had was that he was an ancient soldier.

His physical condition was much better compared to ordinary people, and he had no developed resistance to drugs from modern times.

A quarter of an hour passed.

Wang Yue remained in good condition.

A half quarter...

A half hour...

An hour...

Two hours later.

Wang Yue still showed no abnormalities, and Old Su even took his pulse himself, noticing it was steadily stabilizing.

Clearly.

The intravenous injection.....

Was successful.

.....

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## **Chapter 149 127 Wang Yue Awakens**

[ 895 words ]

To be honest.

The difficulty of this intravenous injection for Xu Yun is far greater than the ordinary injections of the later generations, with considerable risks.

After all, according to the requirements of later generations, intravenous injection involves many sterile-related procedures that must be followed.

But you must know.

At this moment, Wang Yue is already at a critical juncture, with no other path to take.

Applying garlic externally can only prolong his life momentarily; any other methods would have far less success compared to intravenous injection.

Therefore, the current situation is beyond whether the procedure is compliant or not; it can be described as a gamble.

Moreover, intravenous injection originated in the 19th century, which is the early point of modern medicine:

In 1818, London completed the first documented blood transfusion.

In 1831, during a cholera outbreak in Scotland, Thomas Rata first used saline injection.

The timing of these examples was early, and they were conducted with minimal sterilization equipment and methods.

Even from an aseptic perspective.

The measures taken by Xu Yun were better than those two examples:

Medical alcohol couldn't be mass-produced until 1836; before that, the alcohol concentration was generally only around 73%.

This means that the concentration of alcohol used by Thomas Rata was not as high as that used by Xu Yun this time.

So, taking into account Wang Yue's physical condition, intravenous injection is theoretically feasible.

In summary.

A sterile environment is indeed important, but it is a progressive requirement.

That is to say, it's naturally best to have it, but its absence does not necessarily mean complete failure.

Alright.

Returning to reality.

Intravenous infusion drugs directly enter the circulatory system, being much faster in effect than external application, and is one of the fastest methods.

Thus, shortly after Old Su checked the pulse, Wang Yue reacted.

"Cough cough..."

Wang Yue coughed lightly a couple of times and slowly woke up from his bed:

"Uncle Su... Zheng Chen..."

Wang Bing quickly came forward and carefully helped him up, minimizing his movements.

After all, aside from the infection, Wang Yue also had a very deep wound, making it quite laborious to move.

After lying flat.

Wang Yue first took some heavy breaths, evening out his breathing.

Then he cast his gaze towards Xu Yun and, with some effort, cupped his hands and said:

"Mr. Wang, I will remember your life-saving grace; if there's ever a need in the future, just ask... cough cough..."

Xu Yun quickly stepped forward and returned a salute:

"Lord Middle Marquis, you are too kind; you were injured for the country, and I merely did what I could.

If Lord Middle Marquis sees any worth in me, please don't mention any remuneration again."

Looking at Wang Yue, who appeared much better than last time, Xu Yun, while returning the salute, couldn't help but feel complicated emotions within.

He knew better than anyone the fate of this country and knew what kind of enemy they would face in the future:

Even though it's still fifteen years from the official establishment of the Jin Kingdom, and it seems possible to stop the Jurchens from consolidating through some means.

But in fact, the Jurchens had already been merged into a military tribe alliance by Wanyan Wugunai more than twenty years ago.

Currently, Jurchen's Helib has been dead for eight years, and Wanyan Aguda has already risen, making suppression impossible.

So, whether or not the Northern Song will be destroyed is not the question; at the very least, the war between Jin and Song is inevitable.

And Wang Yue, as a member of the Western Army, will likely face the Jin Kingdom.

That's a far stronger enemy than Western Xia and the Liao Kingdom...

Thinking of this.

Xu Yun couldn't help but sigh slightly.

Whether from a personal or national sentiment standpoint, his mission was far from over.

So...

Should I consider increasing the firepower configuration for the Northern Song?

Perhaps make an RPG again or something?

Cough cough...

Thinking too far, thinking too far.

Without dealing with Emperor Huizong, even hand-making a nuclear bomb might be useless.

Afterward, Xu Yun brought his thoughts back to reality and said to the three:

"Lord Middle Marquis's injury is far from healed; two injections are needed every morning and evening for at least three days.

Only after everything is normal three days later can Lord Middle Marquis be considered truly out of life-threatening danger."

Old Su on the side heard and stroked his beard, nodding slightly in agreement:

"I have the same judgment; Zheng Ru's pulse intertwines virtual and real, the internal heat has not subsided, and the injury is still uncertain.

I'll write a prescription later and let Yuan Nian get some medicine from West Gate Pharmacy to help regulate Zheng Ru's body.

By the way, Zheng Chen.

In these days, as you watch over Zheng Ru, only allow him to eat light porridge; think of meat only after the wound heals."

The expression on Wang Yue's face visibly dimmed at these words, and he said awkwardly:

"Uncle, not even lamb?"

Old Su looked at him seriously and shook his head:

"No."

Wang Yue's expression became even more twisted.

It's obvious.

This brave general on the battlefield is also a meat lover in everyday life.

But soon, Wang Yue's expression relaxed.

He seemed to suddenly remember something, became serious, and said to Wang Bing:

"Zheng Ru, I recalled some things recently, and the more I think, the more it feels off. Let me ask you."

Wang Bing nodded:

"Ask anything, brother."

Wang Yue glanced at his wound and recalled:

"If I remember correctly, I was injured in the Laibin area, more than a thousand miles from Bianjing, right?"

Wang Bing continued to nod and answered:

"That's correct."

Wang Yue then pointed to his injury and said:

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## **Chapter 150 127 Wang Yue Awakens\_2**

[ 1,299 words ]

"Then logically speaking, I should have been unable to endure on the road, how could I have managed to return to Bianjing?"

When Wang Bing heard this, his pupils immediately contracted slightly.

His hands instinctively clenched into fists.

He then fell silent for a moment and said:

"This matter is largely thanks to Commander Tong's intervention, otherwise elder brother would have perished on the road."

Hearing this, Wang Yue blinked and said in surprise:

"Commander Tong, isn't he Tong Guan?"

Wang Bing took a deep breath, trying to keep his tone steady:

"It is indeed him. He had an ancestral spirit medicine, specifically crafted to extend life, which Duke Chongguo had once tried to purchase at great expense but failed to obtain.

Seeing elder brother in a critical condition on the road, Commander Tong sent the spirit medicine to the military camp overnight, thus sustaining your life for several days, allowing you to return to Bianjing."

Wang Yue nodded thoughtfully.

Wang Bing's words seemed a bit mysterious, but such situations were not uncommon in ancient times.

Just like the mention of white sugar being used as medicine in the 1665 dungeon before.

Since the bodies of ancient ancestors had low resistance to medicine, many things could rapidly revive the body, serving as a life-sustaining medicine introduction.

For example, white sugar.

Or certain elder ginsengs commonly found in the homes of wealthy landlords.

Thus, if Xu Yun's guess is correct,

the spirit medicine in Tong Guan's hand likely used a similar mechanism:

The spirit medicine was composed of rare medicinal herbs, some of which might have temporarily inhibited bacteria, thus extending Wang Yue's life for a few more days.

As for why it was described as 'temporarily inhibiting bacteria', it's mainly because according to the normal historical trajectory, Wang Yue died shortly after returning to the capital, barely lasting long.

Thus, the spirit medicine clearly did not possess a garlic-like special effect, but merely "suspended" life.

Therefore, setting aside Wang Bing's account and looking at the event itself, it wasn't a particularly mysterious matter.

Returning to reality.

In the room.

After hearing Wang Bing's words, Wang Yue seemed to realize something, and gave his younger brother a deep look:

"So, Zheng Chen, what was the price?"

Wang Bing's chest heaved a few times, and he said frankly:

"As long as elder brother could survive to Bianjing, regardless of life or death in the end, I would have to be transferred from the Profound Brave Guard to serve under Commander Tong.

From then on, wherever he goes, I go."

Hearing this, Wang Yue frowned, opened his mouth as if he wanted to say something.

But after his lips moved a few times, he ultimately said nothing.

Old Su and Xu Yun, seeing this situation, sighed in unison.

Old Su sighed because Wang Bing followed someone not that reputable; after all, regardless of Tong Guan's military achievements, he was still a eunuch.

In this era valuing civility over martial prowess, serving a eunuch wasn't particularly honorable.

And Xu Yun was sighing for...

Another historical mystery had been unveiled.

Actually, Xu Yun... or rather, many later Song historians wondered:

Why did someone with such integrity as Wang Bing choose to follow Tong Guan before the Taiyuan Incident?

Moreover, not only did he follow him, but their relationship was also very special.

Whether it was quelling Fang La or the western campaign, Wang Bing was undoubtedly Tong Guan's top choice among his generals.

He was a trusted subordinate of Tong Guan, much like Li Kui was to Song Jiang.

Yet, this trusted aide barely had any interaction with Tong Guan; their relationship was incredibly subtle.

And now, with Wang Bing's words, this historical mystery finally has an answer:

Because Wang Bing wasn't following Tong Guan for an official position, but because of a promise!

In such a manner,

everything made sense.

Perhaps due to the somber atmosphere, Wang Yue brought up another topic:

"By the way, Zheng Ru, how is the war on the western front?"

Wang Bing slightly straightened his expression, knowing his elder brother intended to change the subject, and said:

"Rest assured, elder brother.

General Wang Hou led the army across the Yellow River the day before yesterday, successfully capturing Ningtiao Stockade, Baidang City, Ningchuan Castle, Nanzong Castle, and other key locations.

We killed over five thousand Xia bandits and seized more than two thousand horses.

Now, east to the Yellow River, Lanzhou Jingyu Pass.

West to Shengzhang Gorge, Zongqi Realm, even further west to Kuozhou Yellow River Realm.

South to the Hezhou Realm, north to the Gai Zhu Realm, all have come under the control of our court.

If nothing goes wrong,

before winter hits this year, our forces should be able to advance to the outskirts of Shanzhou and Guozhou City, Qing Tang's recovery is in sight."

"Exactly!"

Upon hearing this news,

Wang Yue immediately clapped his hands in excitement, forgetting his previous gloom. However, he unintentionally pulled his wound due to the excessive movement, causing him to gasp while saying:

"If Qing Tang can be regained, it will be as if cutting off a limb from the Western Xia bandits; let's see if Doroba dares to come again?"

Wang Bing chuckled and added:

"Elder brother, not only that.

Qing Tang has been known for its fine horses since ancient times. If the court can recruit some horse breeding tribes, perhaps in the future you and I could both ride excellent horses."

Old Su, who had barely spoken, was prompted by the mention of excellent horses and seemed to recall something:

"If that could happen, it would be splendid.

Currently, there aren't many good mounts in the court, below Captain those riding are often using draft horses or even pack horses.

Lucky there's no war in the capital now, otherwise riding them into battle would truly be laughable.

I've heard that Qing Tang has a lake called Beimu Qianghai, with excellent flora, a top choice for horse breeding.

If this place could be used to rear mounts, it would surely alleviate some military needs.

Perhaps seven or eight years later, traveling northward would no longer cause us to fear foreign cavalry."

Watching the three historical figures conversing enthusiastically, next to them, Xu Yun's eyes showed a hint of puzzlement.

In ancient armies, horses were roughly divided into three types:

namely riding horses, draft horses, and pack horses.

Cavalry and officers rode 'riding horses', which demanded agility and strong endurance.

They were also the horse with the highest comprehensive requirements.

Draft horses and pack horses were used for pulling supplies, most having concave backs, offering a poor riding experience.

As for Beimu Qianghai, it refers to the well-known Qinghai Lake of later times.

Qinghai Lake was famous for a superior breed called Haomen Horse, known in history as the Qinghai Horse.

It was one of Huaxia's famous horse breeds, possessing medium build, robust physique, and nimble and swift steps.

It excelled at traversing mountains and was an excellent battle mount.

Some even speculate that Qinghai Lake was where Sun Wukong raised horses.

The Qinghai Horse is considered to be the Dragon Horse in the Journey to the West.

Whether this view is correct is another matter, but at least from a strategic perspective, the Northern Song's campaign to reclaim Qing Tang was undoubtedly a highly valuable strategic move.

As for what puzzled Xu Yun...

Present were Wang Yue, Wang Bing, and Old Su, among them were both civil and military, ranging from high to low positions, yet they could quickly summarize the strategic significance of the Qing Tang region.

Which means.

This value perspective must have certain universality, applicable to both grassroots officers and high-level civil servants.

So the question arises.

Why was such a well-recognized valuable land surrendered soon after?

Did the Emperor of the Great Song really resemble the TPC in Ultraman Tiga, where the whole universe knew Dagu was Tiga, yet the TPC didn't know this?

This clearly doesn't make sense.

Just as Xu Yun pondered,

a knocking sound suddenly came from outside the room,

and after a moment, Elder Xie's voice came from outside:

"Master, there's a visitor."

Old Su glanced outside:

"Who is it?"

"The visiting card is stamped with the insignia of the Assistant Minister, but the visitor is actually the daughter of the Assistant Minister, saying she...

"wants to see Mr. Wang."

.....

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