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# **CUM GRANO SALIS.**

## **BY DAVID GORDON**

**Illustrated by EmsH**

Just because a man can do something others can't does not, unfortunately, mean he knows how to do it. One man could eat the native fruit and live ... but how?

“And that,” said Colonel Fennister glumly, “appears to be that.”

The pile of glowing coals that had been Storage Shed Number One was still sending up tongues of flame, but they were nothing compared with what they'd been half an hour before.

“The smoke smells good, anyway,” said Major Grodski, sniffing appreciatively.

The colonel turned his head and glowered at his adjutant.

“There are times, Grodski, when your sense of humor is out of place.”

“Yes, sir,” said the major, still sniffing. “Funny thing for lightning to do, though. Sort of a dirty trick, you might say.”

“*You* might,” growled the colonel. He was a short, rather roundish man, who was forever thankful that the Twentieth Century predictions of skin-tight uniforms for the Space Service had never come true. He had round, pleasant, blue eyes, a rather largish nose, and a rumbling basso voice that was a little surprising the first time you heard it, but which seemed to fit perfectly after you knew him better.

Right at the moment, he was filing data and recommendations in his memory, where they would be instantly available for use when he needed them. Not in a physical file, but in his own mind.

*All right, Colonel Fennister*, he thought to himself, *just what does this mean—to me? And to the rest?*

The Space Service was not old. Unlike the Air Service, the Land Service, or the Sea Service, it did not have centuries or tradition behind it. But it had something else. It had something that none of the other Services had—*Potential*.

In his own mind, Colonel Fennister spelled the word with an upper [61] case *P*, and put the word in italics. It was, to him, a more potent word than any other in the Universe.

Potential.

*Potential!*

Because the Space Service of the United Earth had more potential [62] than any other Service on Earth. How many seas were there for the Sea Service to sail? How much land could the Land Service march over? How many atmospheres were there for the Air Service to conquer?

Not for any of those questions was there an accurate answer, but for each of those questions, the answer had a limit. But how much space was there for the Space Service to conquer?

Colonel Fennister was not a proud man. He was not an arrogant man. But he *did* have a sense of destiny; he *did* have a feeling that the human race was going somewhere, and he did not intend that that feeling should become totally lost to humanity.

Potential.

Definition: *Potential*; that which has a possibility of coming into existence.

No, more than that. That which has a—

He jerked his mind away suddenly from the thoughts which had crowded into his forebrain.

What were the chances that the first expedition to Alphegar IV would succeed? What were the chances that it would fail?

And (Fennister grinned grimly to himself) what good did it do to calculate chances after the event had happened?

Surrounding the compound had been a double-ply, heavy-gauge, woven fence. It was guaranteed to be able to stop a diplodocus in full charge; the electric potential (*potential!* That word again!) great enough to carbonize anything smaller than a blue whale. No animal on Alphegar IV could possibly get through it.

And none had.

Trouble was, no one had thought of being attacked by something immensely greater than a blue whale, especially since there was no animal larger than a small rhino on the whole planet. Who, after all, could have expected an attack by a blind, uncaring colossus—a monster that had already been dying before it made its attack?

Because no one had thought of the forest.

The fact that the atmospheric potential—the voltage and even the amperage difference between the low-hanging clouds and the ground below—was immensely greater than that of Earth, that had already been determined. But the compound and the defenses surrounding it had already been compensated for that factor.

Who could have thought that a single lightning stroke through one of the tremendous, twelve-hundred-foot trees that surrounded the compound could have felled it? Who could have predicted that it would topple toward the compound itself?

That it would have been burning—that was something that could have been guaranteed, had the idea of the original toppling been considered. Especially after the gigantic wooden life-thing had smashed across the double-ply fence, thereby adding [63] man-made energy to its already powerful bulk and blazing surface.

But—that it would have fallen across Storage Shed Number One? Was *that* predictable?

Fennister shook his head slowly. No. It wasn't. The accident was simply that—an accident. No one was to blame; no one was responsible.

Except Fennister. *He* was responsible. Not for the accident, but for the personnel of the expedition. He was the Military Officer; he was the Man In Charge of Fending Off Attack.

And he had failed.

Because that huge, blazing, stricken tree had toppled majestically down from the sky, crashing through its smaller brethren, to come to rest on Storage Shed Number One, thereby totally destroying the

majority of the food supply.

There were eighty-five men on Alphegar IV, and they would have to wait another six months before the relief ship came.

And they didn't have food enough to make it, now that their reserve had been destroyed.

Fennister growled something under his breath.

"What?" asked Major Grodski, rather surprised at his superior's tone.

"I said: 'Water, water, everywhere—', that's what I said."

Major Grodski looked around him at the lush forest which surrounded the double-ply fence of the compound.

"Yeah," he said. "'Nor any drop to drink.' But I wish one of those boards had shrunk—say, maybe, a couple hundred feet."

"I'm going back to my quarters," Fennister said. "I'll be checking with the civilian personnel. Let me know the total damage, will you?"

The major nodded. "I'll let you know, sir. Don't expect good news."

"I won't," said Colonel Fennister, as he turned.

The colonel let his plump bulk sag forward in his chair, and he covered his hands with his eyes. "I can imagine all kinds of catastrophes," he said, with a kind of hysterical glumness, "but this has them all beat."

Dr. Pilar stroked his, short, gray, carefully cultivated beard. "I'm afraid I don't understand. We could all have been killed."

The colonel peeked one out from between the first and second fingers of his right hand. "You think starving to death is cleaner than fire?"

Pilar shook his head slowly. "Of course not. I'm just not certain that we'll all die—that's all."

Colonel Fennister dropped his hands to the surface of his metal desk. "I see," he said dryly. "Where there's life, there's hope. Right? All right, I agree with you." He waved his hand around, in an all-encompassing gesture. "Somewhere out there, we may find food. But don't you see that this puts us in the Siege Position?"

Dr. Francis Pilar frowned. His thick salt-and-pepper brows rumped [\[64\]](#) in a look of puzzlement.

“Siege Position? I’m afraid—”

Fennister gestured with one hand and leaned back in his chair, looking at the scientist across from him. “I’m sorry,” he said. “I’ve let my humiliation get the better of me.” He clipped his upper lip between his teeth until his lower incisors were brushed by his crisp, military mustache, and held it there for a moment before he spoke.

“The Siege Position is one that no military commander of any cerebral magnitude whatever allows himself to get into. It is as old as Mankind, and a great deal stupider. It is the position of a beleaguered group which lacks one simple essential to keep them alive until help comes.

“A fighting outfit, suppose, has enough ammunition to stand off two more attacks; but they know that there will be reinforcements within four days. Unfortunately, the enemy can attack *more than twice* before help comes. Help will come too late.

“Or, it could be that they have enough water to last a week, but help won’t come for a month.

“You follow me, I’m sure. The point, in so far as it concerns us, is that we have food for about a month, but we won’t get help before six months have passed. We know help is coming, but we won’t be alive to see it.”

Then his eyes lit up in a kind of half hope. “Unless the native flora—”

But even before he finished, he could see the look in Dr. Pilar’s eyes.

Broderick MacNeil was a sick man. The medical officers of the Space Service did not agree with him *in toto*, but MacNeil was in a position to know more about his own state of health than the doctors, because it was, after all, he himself who was sick.

Rarely, of course, did he draw the attention of the medical officers to his ever-fluctuating assortment of aches, pains, signs, symptoms, malaises, and malfunctions. After all, it wouldn’t do for him to be released from the Service on a Medical Discharge. No, he would suffer in silence for the sake of his chosen career—which, apparently, was to be a permanent Spaceman 2nd Class.

Broderick MacNeil had never seen his medical record, and therefore did not know that, aside from mention of the normal slight defects which every human body possesses, the only note on the records was one which said: “Slight tendency toward hypochondria, compensated for by tendency to immerse self in job at hand. According to psych tests, he can competently handle positions up to Enlisted Space Officer 3rd Class, but positions of ESO/2 and above should be carefully considered. (See Psych Rept. Intelligence Sectn.)”

But, if MacNeil did not know what the medics thought of him, neither did the medics know what he thought of them. Nor did they know that MacNeil carried a secret supply of his own personal palliatives, purgatives and poly-purpose pills. He kept them carefully concealed<sup>[65]</sup> in a small section of his space locker, and had labeled them all as various vitamin mixtures, which made them seem perfectly legal, and

which was not *too* dishonest, since many of them *were* vitamins.

On the morning after the fire, he heaved his well-muscled bulk out of bed and scratched his scalp through the close-cropped brown hair that covered his squarish skull. He did not feel well, and that was a fact. Of course, he had been up half the night fighting the blaze, and that hadn't helped any. He fancied he had a bit of a headache, and his nerves seemed a little jangled. His insides were probably in their usual balky state. He sighed, wished he were in better health, and glanced around at the other members of the company as they rose grumpily from their beds.

He sighed again, opened his locker, took out his depilator, and ran it quickly over his face. Then, from his assortment of bottles, he began picking over his morning dosage. Vitamins, of course; got to keep plenty of vitamins in the system, or it goes all to pot on you. A, B<sub>1</sub>, B<sub>2</sub>, B<sub>12</sub>, C, ... and on down the alphabet and past it to A-G. All-purpose mineral capsules, presumably containing every element useful to the human body and possibly a couple that weren't. Two APC capsules. (Aspirin-Phenacetin-Caffeine. He liked the way those words sounded; very medicinal.) A milk-of-magnesia tablet, just in case. A couple of patent-mixture pills that were supposed to increase the bile flow. (MacNeil wasn't quite sure what bile was, but he *was* quite sure that its increased flow would work wonders within.) A largish tablet of sodium bicarbonate to combat excess gastric acidity—obviously a *horrible* condition, whatever it was. He topped it all off with a football-shaped capsule containing Liquid Glandolene—“*Guards the system against glandular imbalance!*”—and felt himself ready to face the day. At least, until breakfast.

He slipped several bottles into his belt-pak after he had put on his field uniform, so that he could get at them at mealtimes, and trudged out toward the mess hall to the meager breakfast that awaited him.

“Specifically,” said Colonel Fennister, “what we want to know is: What are our chances of staying alive until the relief ship comes?”

He and most of the other officers were still groggy-eyed, having had too much to do to even get an hour's sleep the night before. Only the phlegmatic Major Grodski looked normal; his eyes were always about half closed.

Captains Jones and Bellwether, in charge of A and B Companies respectively, and their lieutenants, Mawkey and Yutang, all looked grim and irritable.

The civilian components of the policy group looked not one whit better. Dr. Pilar had been worriedly rubbing at his face, so that his normally neat beard had begun to take on the appearance of a ruptured mohair [66] sofa; Dr. Petrelli, the lean, waspish chemist, was nervously trimming his fingernails with his teeth; and the M.D., Dr. Smathers, had a hangdog expression on his pudgy face and had begun drumming his fingers in a staccato tattoo on his round belly.

Dr. Pilar tapped a stack of papers that lay before him on the long table at which they were all seated. “I have Major Grodski's report on the remaining food. There is not enough for all of us to live, even on the most extended rations. Only the strongest will survive.”

Colonel Fennister scowled. “You mean to imply that we'll be fighting over the food like animals

before this is over? The discipline of the Space Service—”

His voice was angry, but Dr. Pilar cut him off. “It may come to fighting, colonel, but, even if perfect discipline is maintained, what I say will still be true. Some will die early, leaving more food for the remaining men. It has been a long time since anything like this has happened on Earth, but it is not unknown in the Space Service annals.”

The colonel pursed his lips and kept his silence. He knew that what the biologist said was true.

“The trouble is,” said Petrelli snappishly, “that we are starving in the midst of plenty. We are like men marooned in the middle of an ocean with no water; the water is there, but it’s undrinkable.”

“That’s what I wanted to get at,” said Colonel Fennister. “Is there any chance at all that we’ll find an edible plant or animal on this planet?”

The three scientists said nothing, as if each were waiting for one of the others to speak.

All life thus far found in the galaxy had had a carbon-hydrogen-oxygen base. Nobody’d yet found any silicon based life, although a good many organisms used the element. No one yet had found a planet with a halogen atmosphere, and, although there might be weird forms of life at the bottom of the soupy atmospheres of the methane-ammonia giants, no brave soul had ever gone down to see—at least, not on purpose, and no information had ever come back.

But such esoteric combinations are not at all necessary for the postulation of wildly variant life forms. Earth itself was prolific in its variations; Earthlike planets were equally inventive. Carbon, hydrogen, and oxygen, plus varying proportions of phosphorus, potassium, iodine, nitrogen, sulfur, calcium, iron, magnesium, manganese, and strontium, plus a smattering of trace elements, seem to be able to cook up all kinds of life under the strangest imaginable conditions.

Alphegar IV was no different than any other Earth-type planet in that respect. It had a plant-dominated ecology; the land areas were covered with gigantic trees that could best be described as crosses between a California sequoia and a cycad, although such a description would have made<sup>[67]</sup> a botanist sneer and throw up his hands. There were enough smaller animals to keep the oxygen-carbon-dioxide cycle nicely balanced, but the animals had not evolved anything larger than a rat, for some reason. Of course, the sea had evolved some pretty huge monsters, but the camp of the expedition was located a long way from the sea, so there was no worry from that quarter.

At the time, however, the members of the expedition didn’t know any of that information for sure. The probe teams had made spot checks and taken random samples, but it was up to the First Analytical Expedition to make sure of everything.

And this much they had discovered: The plants of Alphegar IV had a nasty habit of killing test animals.

“Of course,” said Dr. Pilar, “we haven’t tested every plant yet. We may come across something.”

“What is it that kills the animals?” asked young Captain Bellwether.

“Poison,” said Major Grodski.

Pilar ignored him. “Different things. Most of them we haven’t been able to check thoroughly. We found some vines that were heavily laced with cyanide, and there were recognizable alkaloids in several of the shrubs, but most of them are not that direct. Like Earth plants, they vary from family to family; the deadly nightshade is related to both the tobacco plant and the tomato.”

He paused a moment, scratching thoughtfully at his beard.

“Tell you what; let’s go over to the lab, and I’ll show you what we’ve found so far.”

Colonel Fennister nodded. He was a military man, and he wasn’t too sure that the scientists’ explanations would be very clear, but if there was information to be had, he might as well make the most of it.

SM/2 Broderick MacNeil kept a firm grip on his blast rifle and looked around at the surrounding jungle, meanwhile thanking whatever gods there were that he hadn’t been put on the fence-mending detail. Not that he objected violently to work, but he preferred to be out here in the forest just now. Breakfast hadn’t been exactly filling, and he was hungry.

Besides, this was his pet detail, and he liked it. He had been going out with the technicians ever since the base had been finished, a couple of weeks before, and he was used to the work. The biotechnicians came out to gather specimens, and it was his job, along with four others, to guard them—make sure that no wild animal got them while they were going about their duties. It was a simple job, and one well suited to MacNeil’s capacities.

He kept an eye on the technicians. They were working on a bush of some kind that had little thorny-looking nuts on it, clipping bits off here and there. He wasn’t at all sure what they did with all those little pieces and bits, but that was none of his business, anyway. Let the brains take [\[68\]](#) care of that stuff; his job was to make sure they weren’t interrupted in whatever it was they were doing. After watching the three technicians in total incomprehension for a minute or so, he turned his attention to the surrounding forest. But he was looking for a plant, not an animal.

And he finally saw what he was looking for.

The technicians paid him no attention. They rarely did. They had their job, and he had his. Of course, he didn’t want to be caught breaking regulations, but he knew how to avoid that catastrophe. He walked casually toward the tree, as though he were only slightly interested in it.

He didn’t know what the name of the tree was. He’d asked a technician once, and the tech had said



that the tree didn't have any name yet. Personally, MacNeil thought it was silly for a thing not to have a name. Hell, *everything* had a name.

But, if they didn't want to tell him what it was, that was all right with him, too. He called it a banana-pear tree.

Because that's what the fruit reminded him of.

The fruit that hung from the tree were six or eight inches long, fat in the middle, and tapering at both ends. The skin was a pale chartreuse in color, with heliotrope spots.

[69] MacNeil remembered the first time he'd seen one, the time he'd asked the tech what its name was. The tech had been picking some of them and putting them into plastic bags, and the faint spark of MacNeil's dim curiosity had been brought to feebly flickering life.

"Hey, Doc," he'd said, "whatcha gonna do with them things?"

"Take 'em to the lab," said the technician, engrossed in his work.

MacNeil had digested that carefully. "Yeah?" he'd said at last. "What for?"

The technician had sighed and popped another fruit into a bag. He had attempted to explain things to Broderick MacNeil before and given it up as a bad job. "We just feed 'em to the monkeys, Mac, that's all."

"Oh," said Broderick MacNeil.

Well, that made sense, anyhow. Monkeys got to eat *something*, don't they? Sure. And he had gazed at the fruit in interest.

Fresh fruit was something MacNeil missed. He'd heard that fresh fruit was necessary for health, and on Earth he'd always made sure that he had plenty of it. He didn't want to get sick. But they didn't ship fresh fruit on an interstellar expedition, and MacNeil had felt vaguely apprehensive about the lack.

Now, however, his problems were solved. He knew that it was strictly against regulations to eat native fruit until the brass said so, but that didn't worry him too much. He'd heard somewhere that a man can eat anything a monkey can, so he wasn't worried about it. So he'd tried one. It tasted fine, something like a pear and something like a banana, and different from either. It was just fine.

Since then, he'd managed to eat a couple every day, so's to get his fresh fruit. It kept him healthy. Today, though, he needed more than just health; he was hungry, and the banana-pears looked singularly tempting.

When he reached the tree, he turned casually around to see if any of the others were watching. They weren't, but he kept his eye on them while he picked several of the fruit. Then he turned carefully around,

and, with his back to the others, masking his movements with his own body, he began to munch contentedly on the crisp flesh of the banana-pears.

“Now, take this one, for instance,” said Dr. Pilar. He was holding up a native fruit. It bulged in the middle, and had a chartreuse rind with heliotrope spots on it. “It’s a very good example of exactly what we’re up against. Ever since we discovered this particular fruit, we’ve been interested in it because the analyses show that it should be an excellent source of basic food elements. Presumably, it even tastes good; our monkeys seemed to like it.”

“What’s the matter with it, then?” asked Major Grodski, eyeing the fruit with sleepy curiosity.

Dr. Pilar gave the thing a wry look and put it back in the specimen bag. [70] “Except for the fact that it has killed every one of our test specimens, we don’t know what’s wrong with it.”

Colonel Fennister looked around the laboratory at the cages full of chattering animals—monkeys, white mice, rats, guinea pigs, hamsters, and the others. Then he looked back at the scientist. “Don’t you know what killed them?”

Pilar didn’t answer; instead, he glanced at Dr. Smathers, the physician.

Smathers steepled his fingers over his abdomen and rubbed his fingertips together. “We’re not sure. Thus far, it looks as though death was caused by oxygen starvation in the tissues.”

“Some kind of anemia?” hazarded the colonel.

Smathers frowned. “The end results are similar, but there is no drop in the hemoglobin—in fact, it seems to rise a little. We’re still investigating that. We haven’t got all the answers yet, by any means, but since we don’t quite know what to look for, we’re rather hampered.”

The colonel nodded slowly. “Lack of equipment?”

“Pretty much so,” admitted Dr. Smathers. “Remember, we’re just here for preliminary investigation. When the ship brings in more men and equipment—”

His voice trailed off. Very likely, when the ship returned, it would find an empty base. The first-string team simply wasn’t set up for exhaustive work; its job was to survey the field in general and mark out the problems for the complete team to solve.

Establishing the base had been of primary importance, and that was the sort of equipment that had been carried on the ship. That—and food. The scientists had only the barest essentials to work with; they had no electron microscopes or any of the other complex instruments necessary for exhaustive biochemical work.

Now that they were engaged in a fight for survival, they felt like a gang of midgets attacking a herd of

water-buffalo with penknives. Even if they won the battle, the mortality rate would be high, and their chances of winning were pretty small.

The Space Service officers and the scientists discussed the problem for over an hour, but they came to no promising conclusion.

At last, Colonel Fennister said: "Very well, Dr. Pilar; we'll have to leave the food supply problem in your hands. Meanwhile, I'll try to keep order here in the camp."

SM/2 Broderick MacNeil may not have had a top-level grade of intelligence, but by the end of the second week, his conscience was nagging him, and he was beginning to wonder who was goofing and why. After much thinking—if we may so refer to MacNeil's painful cerebral processes—he decided to ask a few cautious questions.

Going without food tends to make for mental fogginess, snarling tempers, and general physical lassitude in any group of men. And, while [71] quarter rations were not quite starvation meals, they closely approached it. It was fortunate, therefore, that MacNeil decided to approach Dr. Pilar.

Dr. Petrelli's temper, waspish by nature, had become positively virulent in the two weeks that had passed since the destruction of the major food cache. Dr. Smathers was losing weight from his excess, but his heretofore pampered stomach was voicelessly screaming along his nerve passages, and his fingers had become shaky, which is unnerving in a surgeon, so his temper was no better than Petrelli's.

Pilar, of course, was no better fed, but he was calmer than either of the others by disposition, and his lean frame didn't use as much energy. So, when the big hulking spaceman appeared at the door of his office with his cap in his hands, he was inclined to be less brusque than he might have been.

"Yes? What is it?" he asked. He had been correlating notes in his journal with the thought in the back of his mind that he would never finish it, but he felt that a small respite might be relaxing.

MacNeil came in and looked nervously around at the plain walls of the pre-fab plastic dome-hut as though seeking consolation from them. Then he straightened himself in the approved military manner and looked at the doctor.

"You Dr. Piller? Sir?"

"Pilar," said the scientist in correction. "If you're looking for the medic, you'll want Dr. Smathers, over in G Section."

"Oh, yessir," said MacNeil quickly, "I know that. But I ain't sick." He didn't feel *that* sick, anyway. "I'm Spaceman Second MacNeil, sir, from B Company. Could I ask you something, sir?"

Pilar sighed a little, then smiled. "Go ahead, spaceman."

MacNeil wondered if maybe he'd ought to ask the doctor about his sacroiliac pains, then decided against it. This wasn't the time for it. "Well, about the food. Uh ... Doc, can men eat monkey food all right?"

Pilar smiled. "Yes. What food there is left for the monkeys has already been sent to the men's mess hall." He didn't add that the lab animals would be the next to go. Quick-frozen, they might help eke out the dwindling food supply, but it would be better not to let the men know what they were eating for a while. When they got hungry enough, they wouldn't care.

But MacNeil was plainly puzzled by Pilar's answer. He decided to approach the stuff as obliquely as he knew how.

"Doc, sir, if I ... I uh ... well—" He took the bit in his teeth and plunged ahead. "If I done something against the regulations, would you have to report me to Captain Bellwether?"

Dr. Pilar leaned back in his chair and looked at the big man with interest. "Well," he said carefully, "that would all depend on what it [72] was. If it was something really ... ah ... dangerous to the welfare of the expedition, I'd have to say something about it, I suppose, but I'm not a military officer, and minor infractions don't concern me."

MacNeil absorbed that "Well, sir, this ain't much, really—I ate something I shouldn't of."

Pilar drew down his brows. "Stealing food, I'm afraid, would be a major offense, under the circumstances."

MacNeil looked both startled and insulted. "Oh, nossir! I never swiped no food! In fact, I've been givin' my chow to my buddies."

Pilar's brows lifted. He suddenly realized that the man before him looked in exceptionally good health for one who had been on a marginal diet for two weeks. "Then what *have* you been living on?"

"The monkey food, sir."

"*Monkey food?*"

"Yessir. Them greenish things with the purple spots. You know—they fruits you feed the monkeys on."

Pilar looked at MacNeil goggle-eyed for a full thirty seconds before he burst into action.

"No, of course I won't punish him," said Colonel Fennister. "Something will have to go on the record, naturally, but I'll just restrict him to barracks for thirty days and then recommend him for light duty. But are you *sure*?"

"I'm sure," said Pilar, half in wonder.

Fennister glanced over at Dr. Smathers, now noticeably thinner in the face. The medic was looking over MacNeil's record. "But if that fruit kills monkeys and rats and guinea pigs, how can a *man* eat it?"

"Animals differ," said Smathers, without taking his eyes off the record sheets. He didn't amplify the statement.

The colonel looked back at Pilar.

"That's the trouble with test animals," Dr. Pilar said, ruffling his gray beard with a fingertip. "You take a rat, for instance. A rat can live on a diet that would kill a monkey. If there's no vitamin A in the diet, the monkey dies, but the rat makes his own vitamin A; he doesn't need to import it, you might say, since he can synthesize it in his own body. But a monkey can't.

"That's just one example. There are hundreds that we know of and God alone knows how many that we haven't found yet."

Fennister settled his own body more comfortably in the chair and scratched his head thoughtfully. "Then, even after a piece of alien vegetation has passed all the animal tests, you still couldn't be sure it wouldn't kill a human?"

"That's right. That's why we ask for volunteers. But we haven't lost a man so far. Sometimes a volunteer will get pretty sick, but if a food passes all the other tests, you can usually depend on its not killing a human being."

"I gather that this is a pretty unusual case, then?"

Pilar frowned. "As far as I know, [73] yes. But if something kills all the test animals, we don't ask for humans to try it out. We assume the worst and forget it." He looked musingly at the wall. "I wonder how many edible plants we've by-passed that way?" he asked softly, half to himself.

"What are you going to do next?" the colonel asked. "My men are getting hungry."

Smathers looked up from the report in alarm, and Pilar had a similar expression on his face.

"For Pete's sake," said Smathers, "don't tell anyone—not *anyone*—about this, just yet. We don't want all your men rushing out in the forest to gobble down those things until we are more sure of them. Give us a few more days at least."

The colonel patted the air with a hand. "Don't worry. I'll wait until you give me the go-ahead. But I'll want to know your plans."

Pilar pursed his lips for a moment before he spoke. "We'll check up on MacNeil for another forty-eight hours. We'd like to have him transferred over here, so that we can keep him in isolation. We'll feed him more of the ... uh ... what'd he call 'em, Smathers?"

“Banana-pears.”

“We’ll feed him more banana-pears, and keep checking. If he is still in good shape, we’ll ask for volunteers.”

“Good enough,” said the colonel. “I’ll keep in touch.”

On the morning of the third day in isolation, MacNeil rose early, as usual, gulped down his normal assortment of vitamins, added a couple of aspirin tablets, and took a dose of Epsom salts for good measure. Then he yawned and leaned back to wait for breakfast. He was certainly getting enough fresh fruit, that was certain. He’d begun to worry about whether he was getting a balanced diet—he’d heard that a balanced diet was very important—but he figured that the doctors knew what they were doing. Leave it up to them.

He’d been probed and needled and tested plenty in the last couple of days, but he didn’t mind it. It gave him a feeling of confidence to know that the doctors were taking care of him. Maybe he ought to tell them about his various troubles; they all seemed like nice guys. On the other hand, it wouldn’t do to get booted out of the Service. He’d think it over for a while.

He settled back to doze a little while he waited for his breakfast to be served. Sure was nice to be taken care of.

Later on that same day, Dr. Pilar put out a call for volunteers. He still said nothing about MacNeil; he simply asked the colonel to say that it had been eaten successfully by a test animal.

The volunteers ate their banana-pears for lunch, approaching them warily at first, but soon polishing them off with gusto, proclaiming them to have a fine taste.

[74] The next morning, they felt weak and listless.

Thirty-six hours later, they were dead.

“Oxygen starvation,” said Smathers angrily, when he had completed the autopsies.

Broderick MacNeil munched pleasantly on a banana-pear that evening, happily unaware that three of his buddies had died of eating that self-same fruit.

The chemist, Dr. Petrelli, looked at the fruit in his hand, snarled suddenly, and smashed it to the floor. Its skin burst, splattering pulp all over the gray plastic.

“It looks,” he said in a high, savage voice, “as if that hulking idiot will be the only one left alive when the ship returns!” He turned to look at Smathers, who was peering through a binocular microscope. “Smathers, what makes him different?”

“How do I know?” growled Dr. Smathers, still peering. “There’s something different about him, that’s all.”

Petrelli forcibly restrained his temper. “Very funny,” he snapped.

“Not funny at all,” Smathers snapped back. “No two human beings are identical—you know that.” He lifted his gaze from the eyepiece of the instrument and settled in on the chemist. “He’s got AB blood type, for one thing, which none of the volunteers had. Is that what makes him immune to whatever poison is in those things? I don’t know.

“Were the other three allergic to some protein substance in the fruit, while MacNeil isn’t? I don’t know.

“Do his digestive processes destroy the poison? I don’t know.

“It’s got something to do with his blood, I think, but I can’t even be sure of that. The leucocytes are a little high, the red cell count is a little low, the hemoglobin shows a little high on the colorimeter, but none of ’em seems enough to do any harm.

“It might be an enzyme that destroys the ability of the cells to utilize oxygen. It might be *anything*!”

His eyes narrowed then, as he looked at the chemist. “After all, why haven’t you isolated the stuff from the fruit?”

“There’s no clue as to what to look for,” said Petrelli, somewhat less bitingly. “The poison might be present in microscopic amounts. Do you know how much botulin toxin it takes to kill a man? A fraction of a milligram!”

Smathers looked as though he were about to quote the minimum dosage, so Petrelli charged on: “If you think anyone could isolate an unknown organic compound out of a—”

“Gentlemen! *Please!*” said Dr. Pilar sharply. “I realize that this is a strain, but bickering won’t help. What about your latest tests on MacNeil, Dr. Smathers?”

“As far as I can tell, he’s in fine health. And I can’t understand why,” said the physician in a restrained voice.

Pilar tapped one of the report sheets. “You mean the vitamins?”

“I mean the vitamins,” said Smathers.<sup>[75]</sup> “According to Dr. Petrelli, the fruits contain neither A nor B<sub>1</sub>. After living solely on them for four weeks now, he should be beginning to show some deficiencies—but he’s not.

“No signs?” queried Dr. Pilar. “No symptoms?”

“No signs—at least no abnormal ones. He’s not getting enough protein, but, then, none of us is.” He made a bitter face. “But he has plenty of symptoms.”

Dr. Petrelli raised a thin eyebrow. “What’s the difference between a sign and a symptom?”

“A sign,” said Smathers testily, “is something that can be objectively checked by another person than the patient. Lesions, swellings, inflammations, erratic heartbeat, and so on. A symptom is a subjective feeling of the patient, like aches, pains, nausea, dizziness, or spots before the eyes.

“And MacNeil is beginning to get all kinds of symptoms. Trouble is, he’s got a record of hypochondria, and I can’t tell which of the symptoms are psychosomatic and which, if any, might be caused by the fruit.”

“The trouble is,” said Petrelli, “that we have an unidentifiable disease caused by an unidentifiable agent which is checked by an unidentifiable something in MacNeil. And we have neither the time nor the equipment to find out. This is a job that a fully equipped research lab might take a couple of years to solve.”

“We can keep trying,” said Pilar, “and hope we stumble across it by accident.”

[76] Petrelli nodded and picked up the beaker he’d been heating over an electric plate. He added a chelating agent which, if there were any nickel present, would sequester the nickel ions and bring them out of solution as a brick-red precipitate.

Smathers scowled and bent over his microscope to count more leucocytes.

Pilar pushed his notes aside and went over to check his agar plates in the constant-temperature box.

The technicians who had been listening to the conversation with ears wide open went back to their various duties.

And all of them tried in vain to fight down the hunger pangs that were corroding at their insides.

Broderick MacNeil lay in his bed and felt pleasantly ill. He treasured each one of his various symptoms; each pain and ache was just right. He hadn’t been so comfortable in years. It really felt fine to have all those doctors fussing over him. They got snappy and irritable once in a while, but then, all them brainy people had a tendency to do that. He wondered how the rest of the boys were doing on their diet of banana-pears. Too bad they weren’t getting any special treatment.

MacNeil had decided just that morning that he’d leave the whole state of his health in the hands of the doctors. No need for a fellow to dose himself when there were three medics on the job, was there? If



he needed anything, they'd give it to him, so he'd decided to take no medicine.

A delightful, dulling lassitude was creeping over him.

"MacNeil! *MacNeil!* Wake up, MacNeil!"

The spaceman vaguely heard the voice, and tried to respond, but a sudden dizziness overtook him. His stomach felt as though it were going to come loose from his interior.

"I'm sick," he said weakly. Then, with a terrible realization, "I'm really *awful* sick!"

He saw Dr. Smathers' face swimming above him and tried to lift himself from the bed. "Shoulda taken pills," he said through the haze that was beginning to fold over him again. "Locker box." And then he was unconscious again.

Dr. Smathers looked at him bleakly. The same thing was killing MacNeil as had killed the others. It had taken longer—much longer. But it had come.

And then the meaning of the spaceman's mumbled words came to him. Pills? Locker box?

He grabbed the unconscious man's right hand and shoved his right thumb up against the sensor plate in the front of the metal box next to the bed. He could have gotten the master key from Colonel Fennister, but he hadn't the time.

The box door dilated open, and Dr. Smathers looked inside.

When he came across the bottles, he swore under his breath, then flung [77] the spaceman's arm down and ran from the room.

"That's where he was getting his vitamins, then," said Dr. Pilar as he looked over the assortment of bottles that he and Smathers had taken from the locker box. "Look at 'em. He's got almost as many pills as you have." He looked up at the physician. "Do you suppose it was just vitamins that kept him going?"

"I don't know," said Smathers. "I've given him massive doses of every one of the vitamins—from my own supplies, naturally. He may rally round, if that's what it was. But why would he suddenly be affected by the stuff *now*?"

"Maybe he quit taking them?" Pilar made it half a question.

"It's possible," agreed Smathers. "A hypochondriac will sometimes leave off dosing himself if there's a doctor around to do it for him. As long as the subconscious need is filled, he's happy." But he was shaking his head.

“What’s the matter?” Pilar asked.

Smathers pointed at the bottles. “Some of those are mislabeled. They all say vitamins of one kind or another on the label, but the tablets inside aren’t all vitamins. MacNeil’s been giving himself all kinds of things.”

Pilar’s eyes widened a trifle. “Do you suppose—”

“That one of them is an antidote?” Smathers snorted. “Hell, anything’s possible at this stage of the game. The best thing we can do, I think, is give him a dose of everything there, and see what happens.”

“Yeah, Doc, yeah,” said MacNeil smiling weakly, “I feel a little better. Not real good, you understand, but better.”

Under iron control, Dr. Smathers put on his best bedside manner, while Pilar and Petrelli hovered in the background.

“Now, look, son,” said Smathers in a kindly voice, “we found the medicines in your locker box.”

MacNeil’s face fell, making him look worse. He’d dropped down close to death before the conglomerate mixture which had been pumped into his stomach had taken effect, and Smathers had no desire to put too much pressure on the man.

“Now, don’t worry about it, son,” he said hurriedly; “We’ll see to it that you aren’t punished for it. It’s all right. We just want to ask you a few questions.”

“Sure, Doc; anything,” said MacNeil. But he still looked apprehensive.

“Have you been dosing yourself pretty regularly with these things?”

“Well ... uh ... well, yeah. Sometimes.” He smiled feebly. “Sometimes I didn’t feel so good, and I didn’t want to bother the medics. You know how it is.”

“Very considerate, I’m sure,” said Smathers with just the barest trace of sarcasm, which, fortunately, fell unheeded on MacNeil’s ears. “But which ones did you take every day?”

“Just the vitamins.” He paused.<sup>[78]</sup> “And ... uh ... maybe an aspirin. The only things I took real regular were the vitamins, though. That’s all right ain’t it? Ain’t vitamins food?”

“Sure, son, sure. What did you take yesterday morning, before you got so sick?”

“Just the vitamins,” MacNeil said stoutly. “I figured that since you docs was takin’ care of me, I didn’t need no medicine.”

Dr. Smathers glanced up hopelessly at the other two men. “That eliminates the vitamins,” he said, *sotto voce*. He looked back at the patient. “No aspirin? No APC’s? You didn’t have a headache at all?”

MacNeil shook his head firmly. “I don’t get headaches much.” Again he essayed a feeble smile. “I ain’t like you guys, I don’t overwork my brains.”

“I’m sure you don’t,” said Smathers. Then his eyes gleamed. “You have quite a bit of stomach trouble, eh? Your digestion bad?”

“Yeah. You know; I told you about it. I get heartburn and acid stomach pretty often. And constipation.”

“What do you take for that?”

“Oh, different things. Sometimes a soda pill, sometimes milk of magnesia, different things.”

Smathers looked disappointed, but before he could say anything, Dr. Petrelli’s awed but excited voice came from behind him. “Do you take Epsom salts?”

“Yeah.”

“I wonder—” said Petrelli softly.

And then he left for the lab at a dead run.

Colonel Fennister and Major Grodski sat at the table in the lab, munching on banana-pears, blissfully enjoying the sweet flavor and the feeling of fullness they were imparting to their stomachs.

“MacNeil can’t stay in the service, of course,” said Fennister. “That is, not in any space-going outfit. We’ll find an Earthside job for him, though. Maybe even give him a medal. You sure these things won’t hurt us?”

Dr. Pilar started to speak, but Petrelli cut him off.

“Positive,” said the chemist. “After we worked it out, it was pretty simple. The ‘poison’ was a chelating agent, that’s all. You saw the test run I did for you.”

The colonel nodded. He’d watched the little chemist add an iron salt to some of the fruit juice and seen it turn red. Then he’d seen it turn pale yellow when a magnesium salt was added. “But what’s a chelating agent?” he asked.

“There are certain organic compounds,” Dr. Petrelli explained, “that are ... well, to put it simply, they’re attracted by certain ions. Some are attracted by one ion, some by another. The chelating

molecules cluster around the ion and take it out of circulation, so to speak; they neutralize it, in a way.

“Look, suppose you had a dangerous criminal on the loose, and didn’t have any way to kill him. If you kept [79] him surrounded by policemen all the time, he couldn’t do anything. See?”

The Space Service Officers nodded their understanding.

“We call that ‘sequestering’ the ion,” the chemist continued. “It’s used quite frequently in medicine, as Dr. Smathers will tell you. For instance, beryllium ions in the body can be deadly; beryllium poisoning is nasty stuff. But if the patient is treated with the proper chelating agent, the ions are surrounded and don’t do any more damage. They’re still there, but now they’re harmless, you see.”

“Well, then,” said the colonel, “just what did this stuff in the fruit do?”

“It sequestered the iron ions in the body. They couldn’t do their job. The body had to quit making hemoglobin, because hemoglobin needs iron. So, since there was no hemoglobin in the bloodstream, the patient developed sudden pernicious anemia and died of oxygen starvation.”

Colonel Fennister looked suddenly at Dr. Smathers. “I thought you said the blood looked normal.”

“It did,” said the physician. “The colorimeter showed extra hemoglobin, in fact. But the chelating agent in the fruit turns red when it’s connected up with iron—in fact, it’s even redder than blood hemoglobin. And the molecules containing the sequestered iron tend to stick to the outside of the red blood cells, which threw the whole test off.”

“As I understand it, then,” said Major Grodski, “the antidote for the ... uh ... chelating agent is magnesium?”

“That’s right,” said Dr. Petrelli, nodding. “The stuff prefers magnesium ions to ferrous ions. They fit better within the chelating ring. Any source of magnesium will do, so long as there’s plenty of it. MacNeil was using milk of magnesia, which is the hydroxide, for ‘gastric acidity’. It’s changed to chloride in the stomach. And he was using Epsom salts—the sulfate, and magnesium citrate as laxatives. He was well protected with magnesium ions.”

“We tried it ourselves first, naturally,” said Dr. Pilar. “We haven’t had any ill effects for two days, so I think we’ll be able to make it until the ship comes.”

Major Grodski sighed. “Well, if not, I’ll at least die with a full stomach.” He reached for another banana-pear, then looked over at Petrelli. “Pass the salt, please.”

Silently and solemnly, the chemist handed him the Epsom salts.

THE END

### **Transcriber’s Notes and Errata**

This etext was produced from Astounding Science Fiction, May 1959. Extensive research did not

uncover any evidence that the U.S. copyright on this publication was renewed.

The original page numbers from the magazine were retained.

The following typographical errors were corrected:

| <b>Pa<br/>ge</b> | <b>Err<br/>or</b>         | <b>Co<br/>rre<br/>ctio<br/>n</b> |
|------------------|---------------------------|----------------------------------|
| 63               | cat<br>astr<br>oph<br>ies | cat<br>astr<br>oph<br>es         |
| 65               | Phe<br>naci<br>tin        | Phe<br>nac<br>etin               |
| 65               | Caf<br>fien<br>e          | Caf<br>fein<br>e                 |
| 66               | stac<br>atto              | stac<br>cat<br>o                 |
| 66               | pho<br>sph<br>orp<br>us   | pho<br>sph<br>oru<br>s           |
| 68               | cha<br>rteu<br>se         | cha<br>rtre<br>use               |
| 75               | dizz<br>nes<br>s          | dizz<br>ines<br>s                |
| 76               | Ma<br>cN<br>eal           | Ma<br>cN<br>eil                  |

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