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MURRAY LEINSTER
S.O.S. From Three
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for interstellar catastrophes



Calhoun slid into the pilot's seat as the Med Ship came out of overdrive into normal space. Its vision-screens swirled. They should have pictured myriads of suns of every imaginable tint and degree of brilliance. The Milky Way should have been recognizable though subtly changed, as the *Esclipus Twenty* entered the galaxy of the planet Kryder II for which it was bound.

But there never had been a breakout like this.

The Med Ship was certainly light-centuries from its starting point. Yet, there were no stars, no Milky Way, no nebulas. There was absolutely nothing to match up with reasonable expectations.

Calhoun was sure that, however impossible it seemed, someone had tampered with the Med Ship. Someone didn't want him to reach Kryder II, to investigate the weird plague that was destroying its population.

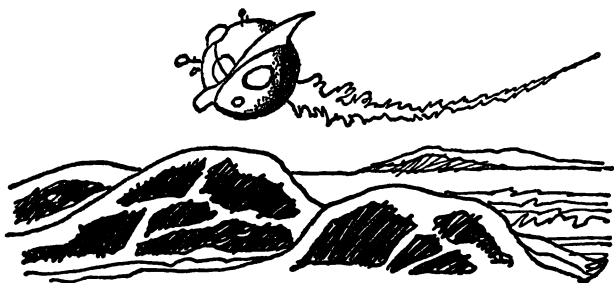
MURRAY LEINSTER, whose real name is Will F. Jenkins, has been entertaining the public with his exciting fiction for several decades. Called the dean of modern science-fiction writers, he was publishing his amazing science-fiction adventures back in the early twenties long before there was ever such a thing as an all-fantasy magazine. His short stories, novelettes, and serial novels have appeared in most of the major American magazines, both slick and pulp, and many have been reprinted all over the world. He has made himself distinguished in the fields of adventure, historical, western, sea and suspense stories.

Murray Leinster's most recent Ace Book was **THE DUPLICATORS** (F-275).

S.O.S. FROM THREE WORLDS

by

MURRAY LEINSTER



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PLAGUE ON KRYDER II

I

AFTER CALHOUN and Murgatroyd the *tormal* were established on board, the Med Ship *Esclipus Twenty* allowed itself to be lifted off from Med Service Headquarters and thrust swiftly out to space. The Headquarters landing-grid did the lifting. Some five planetary diameters out, the grid's force fields let go and Calhoun busied himself with aiming the ship for his destination, which was a very long way off. Presently he pushed a button. The result was exactly the one to be expected. The Med Ship did something equivalent to making a hole, crawling into it, and then pulling the hole in after itself. In fact, it went into overdrive.

There were the usual sensations of dizziness, nausea, and a contracting spiral fall. Then there was no cosmos, there was no galaxy, and there were no stars. The *Esclipus Twenty* had formed a cocoon of highly stressed space about itself which was practically a private sub-cosmos. As long as it existed the Med Ship was completely independent of all creation outside. However, the cocoon was active. It went hurtling through emptiness at many times the speed of light. The *Esclipus Twenty* rode inside it. When the overdrive field—the cocoon—collapsed and the ship returned to normal space, it would find itself very far from its starting point. For every hour spent in overdrive, the ship should

break out somewhat more than a light-year of distance farther away from Med Service Headquarters.

On this occasion the Med Ship stayed in overdrive for three long weeks, while the overdrive field hurtled toward the planet Kryder II. Calhoun was supposed to make a special public health visit there. Some cases of what the planetary government called a plague had turned up. The government was in a panic because plagues of similar type had appeared on two other worlds previously and done great damage. In both other cases a Med Ship man had arrived in time to check and stop the pestilence. In both cases the plague was not a new one, but a pestilence of familiar diseases. In both forerunners of this third plague, the arriving Med Ship's *tormal* had succumbed to the infection. So the government of Kryder II had called for help, and Calhoun and Murgatroyd answered the call. They were on the way to take charge.

Calhoun was singularly suspicious of this assignment. The report on the contagion was tricky. Typically, a patient was admitted to hospital with a case of—say—typhoid fever. It was a sporadic case, untraceable to any previous clinical one. The proper antibiotic was administered. With suitable promptness, the patient ceased to have typhoid fever. But he was weakened, and immediately developed another infectious disease. It might be meningitis. That yielded to treatment, but something else followed, perhaps a virus infection. The series went on until he died. Sometimes a patient survived a dozen such contagions, to die of a thirteenth. Sometimes he remained alive, emaciated and weak. No amount of care could prevent a succession of totally unrelated illnesses. Exposure or non-exposure seemed to make no difference. And the cause of this plague of plagues was undetectable.

It shouldn't be impossible to work out such a problem, of course. Both previous plagues had been checked. Calhoun read and reread the reports on them and wasn't satisfied. The Med Ship man who'd handled both plagues was reported dead, not of sickness, but because his ship had blown itself to bits on the Castor IV spaceport. Such things didn't happen. *Tormals* had died in each pestilence, and *tormals* did not die of infectious diseases.

Murgatroyd was the *tormal* member of the *Esclips Twenty's* crew. During three weeks of overdrive travel he was his normal self. He was a furry, companionable small

animal who adored Calhoun, coffee, and pretending to be human, in that order. Calhoun traveled among the stars on professional errands, and Murgatroyd was perfectly happy to be with him. His tribe had been discovered on one of the Deneb planets; their charming personalities made them prized as pets. A long while ago it had been noticed that they were never sick. Then it developed that if they were exposed to any specific disease, they instantly manufactured overwhelming quantities of antibody for that infection. Now it was standard Med Service procedure to call on them for this special gift. When a new strain or a novel variety of disease-producing germ appeared, a *tormal* was exposed to it. They immediately made a suitable antibody, the Med Service isolated it, analyzed its molecular structure, and synthesized it. So far there hadn't been a single failure. So *tormals* were highly valued members of Med Ship crews.

Now two of them had died in epidemics of the kind now reported from Kryder II. Calhoun was suspicious and somehow resentful of the fact. The official reports didn't explain it. They dodged it. Calhoun fumbled irritably with it. One report was from the Med Service man now dead. He should have explained! The other was from doctors on Castor II after the Med Ship blew up. Nothing explained the explosion of the ship and nothing explained how *tormals* could die of an infection.

Perhaps Calhoun disliked the idea that Murgatroyd could be called on to give his life for Med Service. Murgatroyd worshiped him. Murgatroyd was a *tormal*, but he was also a friend.

So Calhoun studied the reports and tried to make sense of them while the *Esclipus Twenty* traveled at a very high multiple of the speed of light. Its cocoon made it utterly safe. It required no attention. There was a control-central unit below decks which competently ran it, which monitored all instruments and kept track of their functioning. It labored conscientiously for three full weeks and a few hours over. Then it notified Calhoun that breakout from overdrive was just one hour away.

He doggedly continued his studies. He still had the reports of the earlier plagues on his desk when the control-central speaker said briskly, "*When the gong sounds, breakout will be five seconds off.*"

There followed a solemn tick, tock, tick, tock like a slow swaying metronome. Calhoun tucked the reports under a

paperweight and went to the pilot's chair. He strapped himself in. Murgatroyd recognized the action. He went padding under another chair and prepared to hold fast to its rungs with all four paws and prehensile tail. The gong sounded. The voice said, "*Five-four-three-two-one.*"

The ship came out of overdrive. There was a sensation of intense dizziness, a desire to upchuck which vanished before one could act on it. Calhoun held onto his chair during that unhappy final sensation of falling in a narrowing spiral. Then the Med Ship was back in normal space. Its vision-screens swirled.

They should have cleared to picture ten thousand myriads of suns of every imaginable tint and degree of brilliance, from faint phosphorescence to glaring stars of first magnitude or greater. There should have been no familiar constellations, of course. The Milky Way should be recognizable though subtly changed. The Horse's Head and Coalsack dark nebulae should have been visible with their outlines modified by the new angle from which they were seen. There should have been a Sol-type sun relatively near, probably with a perceptible disk. It ought to be the sun Kryder, from whose second planet had come a frightened demand for help. The *Esclipus Twenty* ought to be near enough to pick out Kryder's planets with an electron telescope. Normally well conducted journeys in overdrive ended like that. Calhoun had made hundreds of such sun-falls. Murgatroyd had seen almost as many.

But there was never a breakout like this!

The Med Ship was back in normal space. Certainly. It was light-centuries from its starting point. Positively. Somehow, there were no stars. There was no Milky Way. There were no nebulae, dark or otherwise. There was absolutely nothing of any other kind to match up with reasonable expectations, considering what had led up to this moment.

The screens showed the Med Ship surrounded by buildings on a planet's surface, with a blue and sunlit sky overhead. The screens, in fact, showed the buildings of the Interstellar Medical Service as surrounding the Med Ship. They said that Calhoun had traveled three weeks in overdrive and landed exactly back at the spot from which he'd been lifted to begin his journey.

Murgatroyd, also, saw the buildings on the vision-screens. It is not likely that he recognized them, but when the *Esclipus Twenty* landed, it was the custom for Calhoun to

go about his business and for Murgatroyd to be admired, petted, and stuffed to repletion with sweets and coffee by the local population. He approved of the practice.

Therefore when he saw buildings on the vision-screens he said, "*Cheel*" in a tone of vast satisfaction. He waited for Calhoun to take him aground and introduce him to people who would spoil him.

Calhoun sat perfectly still, staring. He gazed unbelievably at the screens. They said, uncompromisingly, that the Med Ship was aground inside the Med Service Headquarters landing-grid. The buildings were outside it. The screens showed the sky, with clouds. They showed trees. They showed everything that should be visible to a ship aground where ships receive their final checkover before being lifted out to space.

Murgatroyd said, "*Chee-cheel*" with a pleased urgency in his tone. He was impatient for the social success that came to him on every land-on planet. Calhoun turned his eyes to the outside pressure dial. It said there was seven hundred thirty millimeters of gas-pressure—air-pressure—outside. This was complete agreement with the screens.

"The devil!" said Calhoun.

The logical thing to do, of course, would be to go to the air-lock, enter it, and then open the outer door to demand hotly what the hell was going on. Calhoun stirred in the pilot's chair to do exactly that. Then he clamped his jaws tightly.

He checked the nearest-object meter. Its reading was what it should be if the Med Ship were aground at Headquarters. He checked the hull temperature. Its reading was just what it should be if the ship had been aground for a long time. He checked the screens again. He checked the magnetometer, which gave rather unlikely indications in overdrive, but in normal empty space recorded only the Med Ship's own magnetic field. It now registered a plausible Gauss-strength for a planet like the one on which headquarters was built.

He swore. Absurdly enough, he flipped the switch for the electron telescope. It filled a screen with dazzle, as if there were too much light. He could not use it.

Murgatroyd said impatiently, "*Cheel Cheel Cheel*"

Calhoun snapped at him. This was completely impossible: It simply could not be! A little while ago, he'd known the sensations of breakout from overdrive. He'd been dizzy,

he'd been nauseated, he'd felt the usual horrible sensation of falling in a tightening spiral. That experience was real. There could be no doubt about it.

Instruments could be gimmicked to give false reports. In the course of a Med Ship man's training, he went through trainer voyages in ships which never left ground, but whose instruments meticulously reacted as they would in a real voyage. In such training exercises, vision-screens showed blackness when the mock-up ship was theoretically in overdrive, and star-systems when it theoretically came out. A student Med Ship man went through illusory "voyages" that included even contact with theoretic planets; everything that could happen in a spaceship, including emergencies, was included in such mock-up trips. No training unit could simulate the sensation of going into overdrive or coming out of it, and he'd felt them. This was no mock-up trip.

Growling a little, Calhoun threw the communicator-switch. The speaker gave out the confused murmur of ground level signals, like those a space-type communicator picks up in atmosphere. Through it, vaguely, he could hear the whispering, faintly crackling Jansky radiation which can be received absolutely anywhere. He stared again at the vision-screens. Their images were infinitely convincing. Overwhelming evidence insisted that he should go to the air-lock and out of it and hunt up somebody to explain this absurdity. It was inconceivable that a ship should travel for three weeks vastly faster than light and then find itself peacefully aground in its home port. It couldn't happen!

Murgatroyd said impatiently, "*Cheel*"

Calhoun slowly unbuckled the seat-belt intended to help him meet any possible emergency at breakout, but a seat-belt wouldn't help him decide what was reality. He got cagily to his feet. He moved toward the air-lock's inner door. Murgatroyd padded zestfully with him. Calhoun didn't go into the lock. He checked the dials, and from inside the ship he opened the outside lock door. From inside the ship he closed it again. Then he opened the inner lock door.

He heard a hissing that rose to a shout, and stopped.

He swore violently. Every instrument said the ship was aground, in atmosphere, at Interstellar Medical Service Headquarters, but he opened the outer lock door. If there was air there, nothing would happen. If there was no air outside, the air in the lock would escape and leave a vacuum

behind it. He'd closed the outer door and opened the inner one. If there was air inside the lock, nothing could happen, but air had rushed into it with a noise like a shout.

So there'd been a vacuum inside the air-lock; so there was emptiness outside. So the *Esclipus Twenty* was not back at home. It was not aground. Hence, the appearance of Med Service Headquarters outside was illusion and the sound of ground-level communication signals was deception.

The Med Ship *Esclipus Twenty* was lying to the man it had been built to serve. It had tried to lure him into walking out of an air-lock to empty space. It was trying to kill him.

II

ACTUALLY, outside the ship there was nothing even faintly corresponding to the look of things from within. The small vessel of space actually floated in nothingness. Its hull glittered with that total reflection coating which was so nearly a non-radiating surface and was therefore so effective in conserving the heat-supply of the ship. There was a glaring yellow star before the ship's nose. There were other white-hot stars off to port and starboard. There were blue and pink and greenish flecks of light elsewhere, and all the universe was specked with uncountable suns of every conceivable shade. Askew against the firmament, the Milky Way seemed to meander across a strictly spherical sky. From outside the Med Ship, its nature was self-evident. Everywhere, suns shone steadily, becoming more and more remote until they were no longer resolvable into stars but were only luminosity. That luminosity was many times brighter where the Milky Way shone. It was the Milky Way.

Minutes went by. The *Esclipus Twenty* continued to float in emptiness. Then, after a certain interval, the outside air-lock door swung open again and remained that way. Then a radiated signal spread again through the vacancy all about. It had begun before, when the outer door was opened, and cut off when it shut. Now it began to fill a vast spherical space with a message. It traveled, of course, no faster than the speed of light, but in one minute its outermost parts

were eleven millions of miles away. In an hour, they would fill a globe two light-hours in diameter—sixty times as big. In four or five hours, it should be detectable on the planets of that nearby yellow star.

Calhoun regarded the light on the ship's control-board which said that a signal was being transmitted. He hadn't sent it. He hadn't ordered it. The ship had sent it off itself, as of itself, it had tried to lure him out to the vacuum beyond the air-lock.

But the ship was not alive. It could not plan anything. It could not want anything. It had been given orders to lie to him, and the lies should have caused his death. But a man would have had to invent the lies. Calhoun could even estimate exactly how the orders had been given—but not by whom—and where they'd been stored until this instant and how they'd been brought into action. He had no idea why.

The Med Ship was inevitably a highly complex assemblage of devices. It was impractical for one man to monitor all of them, so that task was given to another device to carry out. It was the control-central unit, in substance a specialized computer to which innumerable reports were routed, and from which routine orders issued.

Calhoun did not need, for example, to read off the CO₂ content in the ship's air, the rate of air-renewal, the ionization constant, the barometric pressure and the humidity and temperature to know that the air of the ship was right. The control-central unit issued orders to keep it right, and informed him when it was, and would order a warning if it went wrong. Then he could check the different instruments and find out what was the trouble. However, the control-central made no decisions. It only observed and gave routine orders. The orders that were routine could be changed.

Somebody had changed them; very probably a new and extra control-central unit had been plugged into the ship and the original one cut off. The extra one had orders that when the ship came out of overdrive it was to present pictures of Med Service Headquarters and report other data to match. It could not question these orders. It was only a machine, and it would carry them out blindly and without evaluation.

So now Calhoun ought to be floating in emptiness, his body an unrecognizable object whose outer surface had exploded and whose inner parts were ice. The ship had car-

ried out its orders. Now, undoubtedly, there was something scheduled to happen next. Calhoun hadn't started the signal. It would not be transmitted—it would not have been planned—unless there would be something listening for it, another ship, almost certainly.

Another item. This had been most painstakingly contrived. There must be orders to take effect if the first part did not dispose of Calhoun. The ship had been a deadfall trap, which he'd evaded. It might now be a booby trap, just in case the deadfall failed to work. Yes. A man who orders a machine to commit murder will have given it other orders in case its first attempt fails. If Calhoun went down to verify his suspicion of an extra control-central, that might be the trigger that would blast the whole ship; that in any event would try to kill him again.

Murgatroyd said, "*Cheel Cheel*" The vision-screens meant to him that there must be people waiting outside to give him sweet cakes and coffee. He began to be impatient. He added in a fretful tone, "*Cheel*"

"I don't like it either, Murgatroyd," said Calhoun wryly. "Somebody's tried to kill us—at any rate me—and he must think he had some reason, but I can't guess what it is! I can't even guess how anybody could get to a Med Ship at Headquarters to gimmick it if they wanted to slaughter innocent people like you and me! Somebody must have done it!"

"*Chee-cheel*" said Murgatroyd, urgently.

"You may have a point there," said Calhoun slowly. "We, or at least I, should be dead. We are expected to be dead. There may be arrangements to make certain we don't disappoint somebody. Maybe we'd better play dead and find out. It's probably wiser than trying to find out and getting killed."

A man who has detected one booby trap or deadfall designed for him is likely to suspect more. Calhoun was inclined to go over his ship with a fine-toothed comb and look for them. A setter of bobby traps would be likely to anticipate exactly that and prepare for it. Lethally.

Calhoun looked at the pilot's chair. It might not be wise to sit there. Anybody who received the ship's self-sent call would receive with it an image of that chair and whoever sat in it. To play dead, he shouldn't to anything a dead man couldn't do. So he shrugged. He sat down on the floor.

Murgatroyd looked at him in surprise. The signal going-out light burned steadily. That signal now filled a sphere two hundred millions of miles across. If there was a ship waiting to pick it up—and there'd be no reason for the call otherwise—it might be one or two or ten light-hours away. Nobody could tell within light-hours where a ship would break out of overdrive after three weeks in it.

Calhoun began to rack his brains. He couldn't guess the purpose of his intended murder, but he didn't mean to underestimate the man who intended it.

Murgatroyd went to sleep, curled up against Calhoun's body. There were the random noises a ship tape makes for human need. Absolute silence is unendurable. So there were small sounds released in the ship. Little, meaningless noises. Faint traffic. Faint conversation. Very faint music. Rain, and wind, and thunder as heard from a snug, tight house. It had no significance, so one did not listen to it, but its absence would have been unendurable.

The air apparatus came on and hummed busily, and presently shut off. The separate astrogation unit seemed to cough, somewhere. It was keeping track of the position of the ship, adding all accelerations and their durations—even in overdrive—ending with amazingly exact data on where the ship might be.

Presently Murgatroyd took a deep breath and woke up. He regarded Calhoun with a sort of jocular interest. For Calhoun to sit on the floor was unusual. Murgatroyd realized it.

It was at just this moment, but it was hours after break-out, that the space communicator speaker said metallically, *"Calling ship in distress! Calling ship in distress! What's the trouble?"*

This was not a normal reply to any normal call. A ship answering any call whatever should identify the caller and itself. This wasn't normal. Calhoun did not stir from where he sat on the floor. From there, he wouldn't be visible to whoever saw a picture of the pilot's chair. The call came again.

"Calling ship in distress! Calling ship in distress! What's your trouble? We read your call! What's the trouble?"

Murgatroyd knew that voices from the communicator should be answered. He said, *"Chee?"* and when Calhoun did not move he spoke more urgently: *"Chee-chee-chee!"*

Calhoun lifted him to his feet and gave him a pat in the

direction of the pilot's chair. Murgatroyd looked puzzled. Like all *tormals*, he liked to imitate the actions of men. He was disturbed by breaks in what he'd considered unchangeable routine. Calhoun pushed him. Murgatroyd considered the push a license. He padded to the pilot's chair and swarmed into it. He faced the communicator-screen.

"*Cheel*" he observed. "*Cheel Chee-cheel Cheel*"

He probably considered that he was explaining that for some reason Calhoun was not taking calls today, and that he was substituting for the Med Ship man. However, it wouldn't give that impression at the other end of the communication link-up. It would be some time before his words reached whoever was calling, but Murgatroyd said zestfully, "*Chee-cheel*!" and then grandly, "*Cheel*" and then in a confidential tone he added, "*Chee-chee-chee-cheel*"

Anybody who heard him would be bound to consider that he was the *tormal* member of the Med Ship's crew, that her human crew member was somehow missing, and that Murgatroyd was trying to convey that information.

There came no further calls. Murgatroyd turned disappointedly away. Calhoun nodded rather grimly to himself; somewhere there would be a ship homing on the call the Med Ship was sending without orders from him. Undoubtedly somebody in that other ship watched, and had seen Murgatroyd or would see him. It would be making a very brief overdrive hop toward the Med ship. Then it would check the line again, and another hop. It would verify everything. The care taken in the call just made was proof that somebody was cagey. At the next call, if they saw Murgatroyd again, they would be sure that Calhoun was gone from the Med Ship. Nobody would suspect a furry small animal with long whiskers and a prehensile tail of deception.

Murgatroyd came back to Calhoun, who still sat on the floor lest any normal chair be part of a booby trap to check on the success of the air-lock device.

Time passed. Murgatroyd went back to the communicator and chattered at it. He orated in its direction. He was disappointed that there was no reply.

A long time later the communicator spoke briskly—the automatic volume control did not work, until the first, syllable was halfway spoken. It had to be very near indeed.

"Calling distressed ship! Calling distressed ship! We are close to you. Get a line on this call and give us coordinates."

The voice stopped and Calhoun grimaced. While the distress call—if it was a distress call—went out from the Med Ship there was no need for better guidance. Normally, a ship legitimately answering a call will write its own identification on the spreading waves of its communicator. However, this voice didn't name *Esclipus Twenty*. It didn't name itself. If these messages were picked up some light-hours away on a planet of the sun Kryder, nobody could realize that a Med Ship was one of the two ships involved, or gain any idea who or what the other ship might be. It was concealment. It was trickiness. It fitted into the pattern of the false images still apparent on the Med Ship's screens and the deceptive data given by its instruments.

The voice from outside the ship boomed once more and then was silent. Murgatroyd went back to the screen. He made oratorical gestures, shrilled, "*Chee-chees*," and then moved away as if very busy about some other matter.

Again a long, long wait before anything happened. Then there was a loud, distinct clanking against the Med Ship's hull. Calhoun moved quickly. He couldn't have been seen from the communicator before, and he'd wanted to hear anything that came to the Med Ship. Now it would probably be boarded, but he did not want to be seen until he had more information.

He went into the sleeping cabin and closed the door behind him. He stopped at a very small cupboard and put something in his pocket. He entered a tall closet where his uniforms hung stiffly. He closed that door. He waited.

More clankings. At least two spacesuited figures had landed on the Med Ship's hull-plating. They'd still have long, slender space ropes leading back to their own ship. They clanked their way along the hull to the open air-lock door. Calhoun heard the changed sound of their magnetic shoe soles as they entered the air-lock. They'd loosen the space ropes now and close the door. They did. He heard the sound of the outer door sealing itself. There was the hissing of air going into the lock.

Then the inner door opened. Two figures came out. They'd be carrying blasters at the ready as they emerged. Then he heard Murgatroyd.

"Chee-chee-cheel Cheel"

He wouldn't know exactly how to act. He normally took his cue from Calhoun. He was a friendly little animal. He had never received anything but friendliness from humans,

and of course he couldn't imagine anything else. So he performed the honors of the ship with a grand air. He welcomed the newcomers. He practically made a speech of cordial greeting.

Then he waited hopefully to see if they'd brought him any sweet cakes or coffee. He didn't really expect it, but a *tormal* can always dream.

They hadn't brought gifts for Murgatroyd. They didn't even respond to his greeting. A *tormal* was standard on a Med Ship. They ignored him. Calhoun heard the clickings as spacesuit faceplates opened.

"Evidently," said a rumbling voice, "he's gone. Very neat. Nothing to clean up. Not even anything unpleasant to remember."

A second voice said curtly, "It'll be unpleasant if I don't cut off the rest of it!"

There was a snapping sound, as if a wire had forcibly been torn free from something. It was probably a cable to the control-board which, in the place of a rarely or never used switch, had connected something not originally intended, but which if the cable were broken could not act. Most likely the snapping of this wire should return the ship to a proper control-central system's guidance and operation. It did.

"Hm," said the first voice, "there's Kryder on the screens, and there's our ship. Everything's set."

"Wait!" commanded the curt voice. "I take no chances, I'm going to cut that thing off down below!"

Someone moved away. He wore a spacesuit. The faint creaking of its constant volume joints were audible. He left the control room. His magnetic shoes clanked on uncarpeted metal steps leading down. He was evidently headed for the mechanical and electronic section of the ship. Calhoun guessed that he meant to cut completely loose the extra, gimmicked control-central unit that had operated the ship through the stages that should have led to his death. Apparently it could still destroy itself and the Med Ship.

The other man moved about the cabin. Calhoun heard Murgatroyd say, "*Chee-cheel*" in a cordial tone of voice. The man didn't answer. There are people to whom all animals, and even *tormals* are merely animate objects. There was suddenly the rustling of paper. He'd found the data sheets Calhoun had been studying to the very last instant before breakout.

Clankings. The man with the curt voice came back from below.

"I fixed it," he said shortly. "It can't blow now!"

"Look here!" said the rumbling voice, amused. "He had reports about your Med Ship on Castor IV!" He quoted sardonically, "It has to be assumed that a blaster was fired inside the ship. In any event the ship's fuel stores blew and shattered it to atoms. There is no possibility for more than guesses as to the actual cause of the disaster. The Med Ship doctor was evidently killed, and there was some panic. The destruction of a large sum in currency, which the Med Ship was to have left off at a nearby planet to secure the shipment of uncontaminated foodstuffs to Castor IV, caused some delay in the restoration of normal health and nourishment on the planet. However—" The rumbling voice chuckled. "That's Kelo! Kelo wrote this report!"

The curt voice said, "I'm going to check things."

Calhoun heard the sounds of a thorough checkover, from air apparatus to space communicator. Then the ship was swung about, interplanetary drive went on and off and somebody who knew Med Ships made sure that the *Esclipus Twenty* responded properly to all controls. Then the curt voice said, "All right. You can go now."

One man went to the air-lock and entered it. The lock-pumps boomed and stopped. The outer lock door opened and closed. The man left behind evidently got out of his space-suit. He carried it below. He left it. He returned as the rumbling voice came out of a speaker:

"I'm back on our ship. You can go now."

"Thanks," said the curt voice, sarcastically.

Calhoun knew that the newcomer to the ship had seated himself at the control-board. He heard Murgatroyd say, almost incredulously, "*Chee? Chee?*"

"Out of my way!" snapped the curt voice.

Then the little Med Ship swung, and seemed to teeter very delicately as it was aimed with very great care close to the nearby yellow star. Before, the ship's screens had untruthfully insisted that Med Service Headquarters surrounded the ship. Now they worked properly. There were stars by myriads of myriads, and they looked as if they might be very close. Yet the bright yellow sun would be the nearest, and it was light-hours away. A light-hour is the distance a ray of light will travel, at a hundred eighty-

odd thousand miles per second, during thirty-six hundred of them.

There was a sensation of shocking dizziness and intolerable nausea, swiftly repeated as the Med Ship made an overdrive hop to carry it only a few light-hours. Then there was that appalling feeling of contracting spiral fall. Murgatroyd said protestingly, "*Cheel*"

Then Calhoun moved quietly out of the closet into the sleeping cabin, and then out of that. He was more than halfway to the control-board before the man seated there turned his head. Then Calhoun leaped ferociously. He had a pocket blaster in his hand, but he didn't want to use it if it could be helped.

It was just as effective as a set of brass knuckles would have been, though. Before the other man regained consciousness, Calhoun had him very tidily bound and was looking interestedly over the contents of his pockets. They were curious. Taken literally, they seemed to prove that the man now lying unconscious on the floor was a Med Ship man on professional assignment, and that he was entitled to exercise all the authority of the Med Service itself.

On the word of his documents, he was considerably more of a Med Ship man than Calhoun himself.

"Curiouser and curiouser!" observed Calhoun to Murgatroyd. "I'd say that this is one of those tangled webs we weave when first we practice to deceive. But what's going on?"

III

THE *Esclipus Twenty* hovered, using emergency rocket fuel lavishly while her motion relative to the ground below her carried her past a ridge of high, snow clad mountains and then over a shoreline with pack ice piled against its beaches.

This was not the planet from which a call had been sent and which Calhoun was answering. There was no sign of habitation anywhere. Cold blue sea swept past below. There were some small ice-cakes here and there, but as the shore was left behind they dwindled in number and the water-surface became unbroken save by waves. The moun-

tains sank to the horizon, and then ahead—in the direction of the Med Ship's motion—an island appeared. It was small and rocky and almost entirely snow-covered. There was no vegetation. It was entirely what Calhoun had expected from his examination by electron telescope from space.

This was approximately the equator of the planet Kryder III, which was one planetary orbit farther out than the world which was Calhoun's proper destination. This was an almost frozen planet. It would be of very little use to the inhabitants of Kryder II. There might be mineral deposits worth the working, but for colonization it would be useless.

Calhoun very painstakingly brought the little spaceship down on the nearest possible approach to bare flat stone. Ragged, precipitous peaks rose up on either hand as the ship descended. Miniature glaciers and waterfalls of ice appeared. Once there was a sudden tumult and a swarm of furry—not feathered—creatures poured out of some crevice and swarmed skyward, doubtless making a great outcry because of having been disturbed.

Then the rocket flames touched ice and stone. Steam floated in clouds about the ship. It appeared on the vision-screens as an opaque whiteness. Then the Med Ship tapped stone, and tapped again, and then settled only very slightly askew on what would have to be fairly solid rock. Writhing steam tendrils blotted out parts of all the outside world for long minutes afterward. At last, though, it cleared.

Murgatroyd looked at the snowscape. He saw a place of cold and ice and desolation. He seemed to reach a conclusion.

"Cheel" he said with decision.

He went back to his private cubbyhole. He'd have none of such a landing-place. He preferred to touch ground where there were people to stuff him with assorted edibles.

Calhoun waited alertly until it was certain that the ship's landing-fins had complete solidity under them. Then he pushed himself away from the control-board and nodded to his prisoner.

"Here we are," he observed. "This is Kryder III. You didn't intend to land here. Neither did I. We both expected to touch ground on Kryder II, which is inhabited. This world isn't. According to the Directory, the average daytime temperature here is two degrees Centigrade. We're landed on an island which is forty miles away from a continental land-mass. Since you aren't inclined to be cooperative, I'm go-

ing to leave you here, with such food as I can spare and reasonable equipment for survival. If I can, I'll come back here for you. If I can't, I won't. I suggest that while I get things ready for you to go aground, that you think over your situation. If you give me information that will make it more likely I can come back, it'll be all to the good for you. Anything you hold out will lessen my chances and therefore yours. I'm not going to argue about it. I'm not threatening you. I'm simply stating the facts. Think it over."

He left the control-room to go down into the storage compartments of the ship. It was in no sense a cargo-carrier, but it had to be prepared for highly varied situations its occupant might have to meet. Calhoun began to gather divers items. To gather them he had to put carefully away two objects he'd sealed quite airtight in plastic bags. One was a duplicate of the control-central device that had tried to get him out the air-lock. It was sealed up so no trace of odor could escape, or slowly evaporating oil—such as make fingerprints—or of any of those infinitesimal traces of one's identity every man leaves on anything he handles. The other was the spacesuit the prisoner had worn when he boarded the Med Ship. It was similarly sealed in. The technicians back at Headquarters could make an absolute, recorded analysis of such identifying items, and could prove who'd handled the one device or worn the other.

He came back to the control-room. He carried bundles. He adjusted the lock so both inner and outer doors could be open at the same time. A cold and daunting wind came in as the doors spread wide. Calhoun went down to ground. His breath was like white smoke when he returned.

"Tent and sleeping bag," he commented. "It's chilly!"

He went down to the storage-compartments again. He came up with another burden.

"Food and a heater, of sorts," he said.

He went out. He came back. He went below again. He was definitely generous in the food supply he piled about the first two loads of equipment. When he'd finished, he checked on his fingers. Then he shook his head and went below for cold-climate garments. He brought them up and put them with the rest.

"Anything you want to say?" he asked pleasantly when he returned. "Anything to help me survive and get back here to pick you up again?"

The bound man ground his teeth.

"You won't get away with turning up in my place!"

Calhoun raised his eyebrows.

"How bad's the plague?"

"Go to the devil!" snapped the bound man.

"You were going to land as a Med Ship man," observed Calhoun. "Judging by two previous operations like this, you were going to check the plague. You did that on Castor IV."

The bound man cursed him.

"I suspect," said Calhoun, "that since you blamed the first plague on contaminated grain, and it did stop when all the grain on the planet was burned and fresh supplies brought in from elsewhere, *and* since the same thing happened with the blame on meats on Castor IV, my guess is also contaminated food on Kryder II. Criminals rarely change their method of operation as long as it works well. But there are two things wrong with this one. One is that no bacterium or virus was ever identified as the cause of the plagues. The other is that two *tormals* died. *Tormals* don't die of plagues. They can't catch them. It's impossible. I'm confident that I can keep Murgatroyd from dying of the plague on Kryder II."

The bound man did not speak, this time.

"And," said Calhoun thoughtfully, "there's the very curious coincident that somebody stole the money to buy uncontaminated grain, in the first plague, and the money to buy meat for Castor IV was destroyed when your Med Ship blew up in the spaceport. It was your Med Ship, wasn't it? And you were reported killed. Something had gone around—had, I said—which was about as lethal as the toxin made by *clostridium botulinum*. Only it wasn't a germ caused toxin, because there wasn't any germ, or virus either. Are you sure you don't want to talk?"

The man on the floor spat at him. Then he cursed horribly. Calhoun shrugged. He picked up his prisoner and carried him to the lock door. He took him out. He laid him on the pile of stores and survival-equipment. He carefully unknotted some of the cords that bound his prisoner's hands.

"You can get loose in five minutes or so," he observed. "By the sunset-line when we came in, night is due to fall before long. I'll give you until dark to improve your chances of living by improving mine, then . . ."

He went back to the Med Ship. He entered it and closed the lock doors. Murgatroyd looked inquisitively at

him. He'd watched out the lock while Calhoun was aground. If he'd moved out of sight, the little *tormal* would have tried to follow him. Now he said reproachfully, "*Cheel! Cheel!*"

"You're probably right," said Calhoun dourly. "I couldn't get anywhere by arguing with him, and I wasn't more successful with threats. I don't think he'll talk even now. He doesn't believe I'll leave him here. But I'll have to!"

Murgatroyd said, "*Cheel!*"

Calhoun did not answer. He looked at the vision-screen. It was close to sunset outside. His captive writhed on top of the mass of cloth and stores. Calhoun grunted impatiently, "He's not too good at loosening knots! The sun's setting and he needs light to get the tent up and the heater going. He'd better hurry!"

He paced up and down the control-room. There were small, unobtrusive sounds within the Med Ship. They were little, meaningless noises. Remote traffic sounds. Snatches of talk, which were only murmurings. Almost infinitely faint tinklings of music not loud enough to identify. In the utter soundlessness of empty space, a ship would be maddeningly silent except for such wisps of things to hear. They kept him from feeling maddeningly alone. They kept him reminded that there were worlds on which people moved and lived. They were links to the rest of humanity and they prevented the psychosis of solitude—with, of course, the help of a companionable small animal who adored being noticed by a man.

He went back to the screens. The sun was actually setting, now, and the twilight would be brief, because despite the ice and snow about, this was the equator of this particular world. The prisoner outside still struggled to free himself. He had moved, in his writhing, until he was almost off the pile of dark stuff on the snow. Calhoun scowled. He needed information. This man, who'd shared in a trick designed to kill him, could give it to him. He'd tried to persuade the man to talk. He'd tried to trap him into it. He'd tried everything but physical torture to get a clear picture of what was going on, on Kryder II. A plague which had no bacterium or virus as its cause was unreasonable. The scheduling of a fake Med Ship man's arrival—at the cost of a very neat trick to secure the death of the real one—and the coordination of a human scheme with the progress of a pestilence, this was not reasonable either. Though Calhoun had irritated his prisoner into fury after persuasion

failed, the man had given no information. He'd cursed Calhoun. He'd raged foully. But he'd given no plausible information at all.

It became dark outside. Calhoun adjusted the screens to a higher light-gain. There was only starlight and even with the screens turned up he could see only convulsive struggling movements of a dark figure upon a dark patch of equipment.

He swore.

"The clumsy idiot!" he snapped. "He ought to be able to get loose! Maybe he'll think I mean just to scare him. . . ."

He took a hand lamp and opened the air-lock doors again. He cast the light ahead and down. His captive now lay face-down, struggling.

Growling, Calhoun descended to the snow, leaving the air-lock doors open. He went over to his prisoner. Innumerable stars glittered in the sky, but he was accustomed to the sight of space itself. He was unimpressed by the firmament. He bent over the squirming, panting figure of the man he'd apparently not helped enough toward freedom.

But at the last instant the hand lamp showed the former prisoner free and leaping from a crouched position with his hands plunging fiercely for Calhoun's throat. Then the two bodies came together with an audible impact. Calhoun found himself raging at his own stupidity in being fooled like this. The man now grappling him had been full party to one attempt to kill him by a trick. Now he tried less cleverly but more desperately to kill him with his bare hands.

He fought like a madman, which at that moment he very possibly was. Calhoun had been trained in unarmed combat, but so had his antagonist. Once Calhoun tripped, and the two of them rolled in powdery snow with uneven ice beneath it. In that wrenching struggle, Calhoun's foot hit against something solid. It was a landing-fin of the *Esclipus Twenty*. He kicked violently against it, propelling himself and his antagonist away. The jerk should have given Calhoun a momentary advantage. It didn't. It threw the two of them suddenly away from the ship, but onto a place where the stone under the snow slanted down. They rolled. They slid, and they went together over a stony ledge and fell, still battling, down into a crevasse.

Murgatroyd peered anxiously from the air-lock door. There was no light save what poured out from behind him. He

fairly danced in agitation, a small, spidery, furry creature silhouetted in the air-lock door. He was scared and solicitous. He was panicky. He made shrill cries for Calhoun to come back. "*Cheel*" he cried desperately. "*Chee-cheel! Chee-chee-chee-cheel! . . .*"

He listened. There was the keening sound of wind. There was a vast, vast emptiness all around. This was a world of ice and dreariness, its continents were white and silent, and its beaches were lined with pack ice, there was nothing to be heard anywhere except cold and senseless sounds of desolation. Murgatroyd wailed heartbrokenly.

But after a long, long time there were scratching sounds. Still later, pantings. Then Calhoun's head came up, snow-covered, over the edge of the crevasse into which he'd tumbled. He rested, panting. Then, desperately, he managed to crawl to where snow was waist-deep but the ground proven solid by his previous footprints. He staggered upright. He stumbled to the ship. Very, very wearily, he climbed to the lock door. Murgatroyd embraced his legs, making a clamor of reproachful rejoicing that after going away he had come back.

"Quit it, Murgatroyd," said Calhoun wearily. "I'm back, and I'm all right. He's not. He was underneath when we landed, thirty feet down. I heard his skull crack when we hit. He's dead. If he hadn't been, how I'd have gotten him up again I don't know, but he was dead. No question."

Murgatroyd said agitatedly, "*Cheel! Chee-cheel!*"

Calhoun closed the lock doors. There was a nasty rock scrape across his forehead. He looked like a man of snow. Then he said heavily, "He could have told me what I need to know! He could have told me how they make the plagues work! He could have helped me finish the whole business in a hurry, when there are men dying of it. But he didn't believe I'd actually do anything to him. Stupid! It's insanel!"

He began to brush snow off of himself, with an expression of such sickish bitterness on his face as was normal for a Med Ship man—whose business it is to keep people from dying—when he realized that he has killed a man.

Murgatroyd went padding across the control-room. He swarmed up to where Calhoun kept the crockery. He jumped down to the floor again. He pressed his private, tiny coffee cup upon Calhoun.

"*Cheel!*" said Murgatroyd agitatedly. "*Chee-cheel! Cheel!*"

He seemed to feel that if Calhoun made coffee, that all matters would be returned to normal and distressing memories could be cast aside. Calhoun grimaced.

"If I died you'd have no coffee, eh? All right, as soon as we're on course for Kryder II I'll make you some. But I think I've blundered. I tried to act like a detective instead of a medical man because it should have been quicker. I'll make some coffee in a little while."

He seated himself in the pilot's chair, glanced over the instrument readings, and presently pressed a button.

The *Esclipus Twenty* lifted from her landing place, her rockets lighting the icy stone spires of the island with an unearthly blue-white flame. The speed of her rising increased. A little later, there was only a dwindling streak of rocket-fire ascending to the stars.

IV

THE CRESCENT which was the planet Kryder II enlarged gradually, with the sun many millions of miles beyond it. The *Esclipus Twenty* swung in its course, pointing at a right angle to the line along which it had been moving. Its drive-baffles glowed faintly as the Lawlor interplanetary drive gave it a new impetus, changing its line of motion by adding velocity in a new direction to the sum of all the other velocities it had acquired. Then the ship swung back, not quite to its former bearing but along the line of its new course.

Inside the ship, Calhoun again aimed the ship. He used the sighting-circle at the very center of the dead-ahead vision-screen. He centered a moderately bright star in that glowing circle. The star was a certain number of seconds of arc from the planet's sunlit edge. Calhoun watched. All about, in every direction, multitudes of shining specks—actually suns—floated in space. Many or most of them warmed their families of planets with the solicitude of brooding hens. Some circled each other in stately, solemn sarabands. There were some, the Cepheids, which seemed to do neither but merely to lie in emptiness, thin and gaseous, pulsating slowly as if breathing.

Calhoun relaxed, satisfied. The guide-star remained at exactly the same distance from the crescent planet, while the Med Ship hurtled toward it. This arrangement was a standard astrogational process. If the moving planet and the sighting-star remained relatively motionless, the total motion of the Med Ship was exactly adjusted for approach. Of course, when close enough the relationship would change, but if the ship's original line was accurate, the process remained a sound rule-of-thumb method for approaching a planet.

The Med Ship sped on. Calhoun, watching, said over his shoulder to Murgatroyd, "We're pretty much in the dark about what's going on, Murgatroyd, not in the matter of the plague, of course. That's set up to be ended by somebody arriving in a Med Ship, as in two cases before this one. But if they can end it, they needn't have started it. I don't like the idea of anything like this being unpunished."

Murgatroyd scratched reflectively. He could see the vision-screens. He could have recognized buildings as such, though probably not as individual ones. On the screens, save for the sun and one crescent-planet, there were only dots of brightness of innumerable colorings. To Murgatroyd, who spent so much of his life in space travel, the stars had no meaning whatever.

"Technically," observed Calhoun, "since medicine has become a science, people no longer believe in plague-spreaders. Which makes spreading plagues a possible profession."**

Murgatroyd began to clean his whiskers, elaborately licking first the right-hand and then the left-hand ones.

**In June of 1630 (standard) one Guglielmo Piazza, who was commissioner of health of the city of Milan, was seen to wipe ink off his fingers against a building wall. He was immediately accused of wiping the walls with matter to produce bubonic plague. Put to the torture, he finally confessed; when pressed for confederates he despairingly named a barber named Mora. The barber, under torture, named a Don Juan de Padilla as another confederate in the dissemination of bubonic plague. They were not asked to name others, but were executed in the utterly barbarous methods of the period and a "column of infamy" erected to warn others against this crime. This is but one example. See *"Devils, Drugs and Doctors,"* Haggard, Harper and Bro. N.Y. 1929.

Calhoun again checked the relative position of the sighting-star and Kryder II. He brought out a microfilm reel and ran it through. It was a resume of the history of toxicology. He hunted busily for items having to do with the simulation of bacterial toxins by inorganic compounds. He made notes, not many. He consulted another reel. It dealt with antigens and antibodies. He made more notes and consulted a third reel.

He worked carefully with pencil and paper and then, with his memos at hand, he punched the keys of the very small computer which acted as a reference library. It was a very remarkable library. It was packed in a number of cubic feet of microfiles which stored tens of thousands of items of information in a cubic inch of substance. The little computer could search them all—all the millions of millions of facts—in a matter of minutes and make its discoveries into a report. Calhoun set it to find the known compounds with such-and-such properties, a boiling-point above so-and-so, with an inhibitive effect upon the formation of certain other compounds.

The little device accepted his command. It could do what Calhoun could not, in the speed and precision of its search. But he could take the information it provided and do what no computer could imaginably try. Calhoun could set up his own problem. No computer can do that. Calhoun could devise a way to solve it. No computer can do anything so original. Calhoun could think.

He went back to the pilot's chair. The crescent world was noticeably nearer and larger. Calhoun became absorbed in the delicate task of putting the Med Ship in suitable orbit around Kryder II. The ship obeyed him. It swung around to the green world's sunlit hemisphere. He addressed the communicator microphone:

"Med Ship Esclipus Twenty calling ground to report arrival and ask coordinates for landing. Our mass is fifty standard tons. Repeat, five-oh tons. Purpose of landing . . . response to planetary health department request for services."

Behind him, the small computer stuttered and extruded a six-inch strip of paper tape, on which there was new printing. Calhoun heard, but did not heed it. He watched as more of the surface of the nearing planet came into view with the Med Ship's swing around it. There were bright green continents, showing irregular streaks of white glaciation where mountain ranges rose. There were seas and

oceans and cloud masses and that filmy blue haze at the horizon which so much surprised the first explorers of space.

"*Med Ship Esclipus*—" Calhoun's recorded voice repeated the call. Murgatroyd popped his head out of his personal cubbyhole. When Calhoun talked, but not to him, it meant that presently there would be other people around. And people did not long remain strangers to Murgatroyd. He made friends with ease and zest. Except for Calhoun, Murgatroyd defined friends as people who gave him sweet cakes and coffee.

The communicator speaker said:

"*Calling Med Ship! Ground calling Med Ship! Coordinates are . . .*" The voice named them. It sounded warm and even rejoicing through the speaker, as if the landing-grid operator had a personal interest in the arrival of a man sent by the Interstellar Medical Service. "*We're plenty glad you've come, sir! Plenty glad! Did you get the co-ordinates? They're . . .*"

"*Cheel*!" said Murgatroyd zestfully.

He clambered down to the control-room floor and looked at the screen. When Calhoun spoke again to the grid operator, Murgatroyd strutted. He would land, and he would be the center of attention everywhere so long as the Med ship was aground. He practically crooned his delight.

"*Yes, sir!*" said the voice from the ground. "*Things were looking pretty bad! There's a Doctor Kelo here, sir. He was on Castor IV when they had a plague there. He says the Med Service man that came there got it licked right off. Excuse me, sir. I'm going to report you're coming in.*"

The voice stopped. Calhoun glanced at the coordinates he'd written down and made adjustments for the Med Ship's needed change of course. It was never necessary to be too precise in making a rendezvous with a landing-grid. A ship had to be several planetary diameters out from ground to have even its interplanetary drive work. But a grid's force fields at so many thousands of miles distance were at first widely spread and tenuous. They reported to ground when they first touched the incoming ship. Then they gathered together and focused on the spacecraft, and then they tightened and grew strong. After that they pulled the ship down gently out of emptiness to the center of that half-mile high circle of steel girders and copper cable which was the landing-grid. It took time to pull a ship down some thousands of miles. Too violent a pull could be dis-

astrous to the crew, but ordinarily it was marvelously effective and totally safe.

The communicator screen swirled suddenly and then presented a very clear picture of the grid-control office. It showed the operator. He gazed admiringly at Calhoun.

"I've reported, sir," he said warmly, "and Doctor Kelo's coming right now! He was at the big hospital, where they've been working on what the plague can be. He's coming by copter . . . won't be long."

Calhoun reflected. According to his data, Doctor Kelo had been a prominent physician on Castor IV when the Med Ship man there had presumably been killed in the detonation of the ship. Doctor Kelo had made a report on that matter. The two men who'd come to take over the Med Ship at its breakout point, not an untold number of hours ago, had read his report with seeming amusement. They'd noted Doctor Kelo's name. It was at least interesting that this same Doctor Kelo was here, where there also was a plague. However, the Med Ship man he expected wasn't Calhoun. Calhoun was supposed to be floating somewhere in emptiness, light-hours away from here.

The grid operator watched his dials. He said, pleased, *"Got it, sir! Fifty tons, you said. I'll lock on."*

Calhoun felt the curious fumbling sensation the grid's force fields produced when they touched and gathered around the ship, and then the cushiony thrustings and pushings when the fields focused and intensified. The *Esclupus Twenty* began its descent.

"I'll bring you down now, sir," said the operator of the grid, very happily. *"I'll make it as quick as I can, but you're a long way out!"*

Landing was bound to be a lengthy process, much longer than lifting off. One could not snatch a ship from space. It had to be brought down with no more acceleration planetward than a ship's company could endure. Eventually the downward speed had to be checked so the contact with the ground would be a gentle one. A grid could smash a ship to atoms by bringing it down on the spaceport tarmac with a velocity of miles per second. This was why interplanetary wars were impossible. A landing-grid could smash any ship in space if it approached a planet with hostile intentions.

"I suppose," said Calhoun, "there's a lot of concern

about the—epidemic. The planetary health department asked for me.”

“Yes, sir! It’s real bad! Started three months ago. There were half a dozen cases of pneumonia. Nobody thought much about it. They were treated, and stopped having pneumonia, but they weren’t well. They had something else, not the same thing, either. There was typhoid and meningitis and so on. This’s what the newcasts say. Then other cases turned up. A child would have measles, and it would turn to tetanus, and that to pneumonia, and that to scarlet fever. . . . It couldn’t happen, the doctors said, but it was happening! The hospitals filled up. More came in all the time, and none of them could leave. They could keep most of the cases alive, but they had to cure ’em of something else all the time. They had to turn schools and churches into hospitals. One person in ten is sick already. More are taken down every minute. Presently, there won’t be doctors enough to diagnose the diseases patients contract continually. They figure that a quarter of the whole population will be down inside of two weeks more, and then they’ll start dying faster than they do now, because there won’t be enough well people to take care of ’em. They figure there won’t be anybody on his feet in a month and a half from now and that’ll be the end for everybody.”

Calhoun clamped his jaws together.

“They’ve stopped giving it out,” said the grid operator. He added professionally, “I’ve got you coming down at four hundred feet a second, but I’m going to pull a lot harder! You’re needed down here in a hurry! I’ll put on the brakes at a thousand miles, and you’ll touch ground like a feather.”

Calhoun ground his teeth. Strictly speaking, he should discuss the plague only with qualified medical men. But the public attitude toward a disease has to be considered in its treatment. This, however, was plainly not a disease. A given bacterium or virus can produce one disease only. Its activity may vary in virulence, but not in kind. Viruses do not change to bacteria. Cocci do not change to spirochetes. Each pathogenic organism that exists remains itself. It may change in viciousness, but never in form. The plague as described could not be a plague! It could not be!

Immediately one ceased to think of it as a natural plague; immediately one considered it artificial, it made sense. It tended to spread toward a total, cent-percent

matching of number of cases to the number of people on the planet. Normal pestilences do not. It was planned that a fake Med Ship man should arrive at a certain time and end it. This would be absurd if the plague were a natural one. It was the third of its kind, and the first two had killed *tormal*s—which pestilences could not—and in each case large sums of money had disappeared.

"Doctor Kelo, sir," said the grid operator, "said he was sure that if a Med Ship man could get here with his—what's that little creature? A tormal? Once a Med Ship man got here with his tormal, the plague was as good as licked." He stopped and listened. *"Doctor Kelo must be here now. There's a copter landing outside."*

Then the grid man said with a rather twisted grin, *"I tell you, everybody's glad you're here! I've got a wife and kids. They haven't got the plague yet, but . . ."*

He stood up. He said joyously, *"Doctor Kelo! Here he is! Right here on the screen! We've been talkin'. He's comin' down fast, and I'll have him aground in a hurry!"*

A voice said, *"Ah, yes! I am most pleased. Thank you for notifying me."*

Then a new figure appeared on the vision-screen. It was dignified. It was bearded. It was imposing in the manner of the most calmly confident of medical men. One could not look at Doctor Kelo without feeling confidence in him. He seemed benign. He beamed at the grid man and turned to the vision-screen.

He saw Calhoun. Calhoun regarded him grimly. Doctor Kelo stared at him. Calhoun was not the man who'd been put aboard the Med Ship at first breakout point. He wasn't the man who'd handled the Castor IV epidemic, or the one before that. He wasn't the man who was supposed to have been killed when a Med Ship blew up in the Castor IV spaceport. He wasn't . . .

"How do you do?" said Calhoun evenly. *"I gather we are to work together—again, Doctor Kelo."*

Doctor Kelo's mouth opened, and shut. His face went gray. He made an inarticulate sound. He stared at Calhoun in absolute stupefaction. Murgatroyd squirmed past Calhoun's body to look into the communicator-screen. He saw a man, and to Murgatroyd that meant that shortly he would be aground among people who admired him adoringly and would therefore stuff him with all the things he liked to eat and drink.

"Cheel" said Murgatroyd cordially. *"Chee-cheel"*

The stark incredulity of the bearded face changed to shock. That expression became purest desperation. One of Doctor Kelo's beautifully manicured hands disappeared. It appeared again. There was a tiny snapping sound and the grid operator became suddenly boneless. He seemed to bend limply in all his joints and almost to pour downward to the floor.

Doctor Kelo turned swiftly to the dials of the landing-grid control-board. He surveyed them, panting suddenly. Of course, a landing-grid can do its work in many different fashions. It can use the processes of normal space commerce to make space war impossible. Because it can be deadly.

Doctor Kelo reached out. Calhoun could not see exactly what he did, but he could guess its purpose. Immediately, he felt a surging of the Med Ship which told him exactly what had been done. It was an increased downward velocity of the ship, which had to be brought down rapidly for most of its descent, or otherwise the grid would swing around to the night side of this world where, with a planet's bulk between, it could not do anything with the Med Ship at all. However, high acceleration toward the ground could be used to a certain point only. Below a critical distance the ship couldn't be stopped. It would be bound to crash to flaming destruction against the world it had meant to land on.

The ship surged again. It plunged planetward with doubled acceleration. In the grip of the landing-grid's force fields, it built up to a velocity far beyond any at which it could be slowed for a safe landing. It was building up toward the speed of shooting stars, which consume themselves when they touch atmosphere. It was still thousands of miles out in emptiness, still speeding crazily to inevitable destruction.

V

CALHOUN SAID COLDLY, "I've got to learn how a murderer thinks, Murgatroyd. While I'm thinking there's a situation

they have to meet, these characters work out a way to kill me, as if that was bound to settle everything. I can't anticipate the ideas they get automatically!"

He placed his hands on the control-board where he could act in an infinitesimal fraction of a second. He waited. The Med Ship was in the grip of an immaterial field of force which was capable of handling a merchant ship of space, whereas the *Esclipus Twenty* was as small as a ship could be and still perform a Med Ship's functions.

The fact that a field of force is not a solid object has its consequences. A solid object can exert a thrust in three dimensions. If it is rigid, it can resist or impose thrusts in any direction, up or down, right or left, and away from or toward itself. However, a field of force can only act in one: toward or away from, or up or down, or left or right. It cannot push in one direction while resisting a thrust from another. So a grid field could pull a ship downward with terrific force, but it could not pull the ship sidewise at the same moment, and that happened to be what was necessary.

There is a certain principle known as the conservation of angular momentum. A ship approaching a planet has always some velocity relative to the planet's surface. Within a wide range of speeds, that angular velocity will make a ship take up an orbit at a distance appropriate to its speed. The greater the speed, the lower the orbit. It is like a weight on a string, twirled around one's finger. As the string winds up, the weight spins faster. It is like a figure skater spinning in one spot on the ice with arms outstretched, who spins more and more rapidly as he brings his arms closer to his body. The *Esclipus Twenty* had such orbital, angular momentum. It could not descend vertically without losing its velocity. If it was to land safely, it would have to lose its velocity and at the moment it touched ground it must have exactly the motion of the ground it touched, for exactly the same reason that one stops a ground-car before stepping out of it.

But a grid-field could only push or pull in one direction at a time. To land a ship it must cease to pull planetward from time to time, and push the ship sidewise to match its speed to that of the ground. If it didn't, the ship would go on beyond the horizon—or seem to.

So Calhoun waited. Grimly. The ship, plunging vertically, still retained its lateral speed. That speed drove it toward

the horizon. It was necessary to pull it back to pull it down. So the bearded man, cursing as the ship swung away from the vertical, fumbled to pull it back.

An extremely skilled operator might well have done so, even against Calhoun's resistance. The shift of directional pull—or thrust—could have been made so swiftly that the ship would be actually free of all fields for less than the hundredth of a second. However, such fine work required practice.

Calhoun felt the ship shiver for the fraction of an instant. For that minute portion of a heartbeat, the downward pull had to be cut off so the sidewise push could be applied. But in that instant Calhoun jammed down the emergency-rockets' control to maximum possible thrust. He was flung back into the pilot's chair. The weight of his chest forced air explosively out of his lungs. Murgatroyd went skittering across the floor. He caught an anchored chair leg with a wide sweep of his spidery arms and clung there desperately, gasping.

Three. Four. Five seconds. Calhoun swung the ship's nose and went on. Seven. Eight. Nine. Ten.

He cut the rocket-blast at the last instant before he would have blacked out. He panted. Murgatroyd said indignantly, "*Cheel Cheel Cheel*"

Calhoun said with some difficulty, "Right! I did you a dirty trick, but it had to be done! Now if we can keep him from getting his field locked on us—again . . ."

He sat alertly in the pilot's chair, recovering from the strain of such violent acceleration for even so brief a period. A long time later there was a faint, fumbling sensation as if a force field, groping, touched the ship. He blasted off at an angle at high acceleration again.

Then the ship was clear. It reached a spot where the landing-grid, on the curved surface of Kryder II, was below the horizon. The Med Ship had orbital velocity. Calhoun made certain of it when he looked at the nearest object indicator. He was then very close to atmosphere but the planet now below him curved downward and away from his line of flight. The ship was actually rising from the planetary surface. Calhoun had escaped a collision with Kryder II by speeding up across its face. One can sometimes avoid a collision in traffic by speeding up, but it is not the safest thing for either ground-cars or spaceships to do.

Murgatroyd made querulous noises to himself. Calhoun

got out the data on the planet Kryder II. There were continents and highways and mountain ranges and cities. He studied the maps and a view of the actual surface beneath him. The communicator-screen was blank, and had been since the horizon rose between the grid and the fleeing ship. He flipped it off. At the sunset line there was a city. He located himself.

Murgatroyd said, "Cheel" in an apprehensive tone as the emergency-rockets roared again.

"No," said Calhoun. "No more full-force rocketeering, Murgatroyd. And I'm not going to take the chance of being outwitted again. I've been fooled twice by not knowing how a murderer's mind works. I'm going to opearate out of contact with such characters for a while. I'm going to land and do a burglary and get back out to space again."

He checked on maps. He glanced frequently at the nearest-object dial. He swung the ship and blasted his rockets again, and watched the dial, and used the rockets still again. The Med Ship was slowing. It curved downward. Presently, the needle of the nearest-object dial quivered. The Med Ship, still out of atmosphere, was passing above mountains.

"Now, if we can land beyond, here . . ." said Calhoun.

Murgatroyd was not reassured. He watched. He grew uneasy as Calhoun went through the elaborate, tricky, and definitely dangerous operation of landing the Med Ship in the dark, on unknown terrain, and by instruments only except for the last few minutes. During those last few minutes the screens showed forests below the hovering Med Ship, lighted in unearthly fashion by the rocket-flames. With that improbable light he finished the landing. He remained alert until sure that the ship was steady on her landing-fins. He cut off the rockets. He listened to the outside microphones' report. There were only the night sounds of a long colonized planet, where a Terran ecological system had been established and there were birds and insects of totally familiar varieties.

He nodded to himself. He turned on the planetary-communications receiver. He listened for a long time. He heard news broadcasts. There was no mention of the Med Ship reported as arriving. There was resolutely hopeful news of the plague. It had broken out in a new area, but there was great hope that it could be contained. The use of combined antibiotics seemed to promise much. The death

rate was said to be down slightly. There was no mention of the fact that the real percentage of deaths might be obscured by a large increase of new patients who wouldn't normally die just yet.

Calhoun listened. At last, he stirred. His eyes fell upon the small computer which had searched in the ship's micro-files for data on compounds with boiling-points below such-and-such, with absorption coefficients in certain ranges, which had an inhibitive effect upon the formation of certain other substances.

Projecting from the answer-slot there was a six-inch strip of newly printed paper, waiting to give him the information he'd asked for. He read it. He looked pleased.

"Not bad," he told Murgatroyd. "The broadcasts says the plague's prevalent in this area, and this says we want some groceries and ditch-water. I've the crudes to make up these prescriptions."

He made ready to go aground. He was armed. He took a compass. He took certain highly odorous pellets. Murgatroyd zestfully made ready to accompany him.

"No," said Calhoun. "Not this time, Murgatroyd! You have many gifts, but burglary isn't one of them. I couldn't even depend on you to be a properly suspicious lookout."

Murgatroyd could not understand. He was bewildered when Calhoun left him in the Med Ship with water and food at hand. When Calhoun closed the inner air-lock door, he could still hear Murgatroyd arguing desperately, "*Cheel Cheel*"

Calhoun dropped an odorous pellet on the ground and moved away on a compass course. He had a hand lamp, which he used sparingly. There were tree trunks to run into and roots to stumble over and much brushwood to be thrust through. Ultimately he came upon a highway. He deposited a pellet. With his hand lamp off, he searched as much of the sky as he could. He concluded that there was a faint glow in the sky to southward. He set out along the highway toward it.

It was not less than four miles away, and then there was a small town, and it seemed lifeless. Street lights burned, but there were no lighted windows anywhere. There was no motion.

He moved cautiously among its streets. Here and there he saw a sign, "*Quarantine*." He nodded. Things had gotten really bad! Normal sanitary measures would prevent

the spread of contagion of a normal kind. When infections led to the quarantine of every house where plague appeared, it meant that doctors were getting panicky and old-fashioned. However, the ideas of the causes of pestilences would remain modern. Nobody would suspect an epidemic of being actually a crime.

He found a merchandise center. He found a food shop. All the night was dark and silent. He listened for a long, long time, and then committed burglary.

With his hand lamp turned down to the faintest of glimmers, he began to accumulate parcels. There was plague in this area and this town. Therefore, he painstakingly picked out parcels of every variety of foodstuff in the food shop's stock. He stuffed his loot into a bag. He carried everything, even salt and sugar and coffee, meat, bread, and vegetables in their transparent coverings. He took a sample—the smallest possible—of everything he could find.

He piously laid an interstellar currency note on the check-out desk. He left. He went back to the highway by which he'd arrived. He trudged four miles to where a pellet designed for something else made a distinctive patch of unpleasant smell. He turned and traveled by compass until he found another evil smelling spot. Again by compass . . . and he arrived back at the Med Ship. He went in.

Murgatroyd greeted him with inarticulate cries, embracing his legs and protesting vehemently of his sufferings during Calhoun's absence. To keep from stepping on him, Calhoun tripped. The bag of his burglarized acquisitions fell. It broke. Something smashed.

"Stop it!" commanded Calhoun firmly. "I missed you too. But I've got work to do, and I didn't run across any ditch-water. I've got to go out again."

He forcibly prevented Murgatroyd from going with him, and he spent an hour fumbling for a swampy spot in the dark forest. In the end he packed up damp and half-rotted woods-mold. He carried that back to the ship. Then he began to collect the grocery packages he'd dropped. A package of coffeebeans had broken.

"Damn!" said Calhoun.

He gathered up the spilled beans. Murgatroyd assisted. Murgatroyd adored coffee. Calhoun found him popping the beans into his mouth and chewing in high delight.

He went about the essential, mundane labor he'd envisioned. He prepared what a physician of much older times

would have called a decoction of rotted leaves. He examined it with a microscope. It was admirable! There were paramecia and rotifers and all sorts of agile microscopic creatures floating, swimming, squirming and darting about in the faintly brownish solution.

"Now," said Calhoun, "we will see if we see anything."

He put the fraction of a drop of a standard and extremely mild antiseptic on the microscope slide. The rotifers and the paramecia and the fauna of the ditch-water died. Which, of course, was to be expected. Single-celled animals are killed by concentrations of poison which are harmless to greater animals. Antiseptics are poisons and poisons are antiseptics, but antiseptics are poisons only in massive doses. But to a rotifer or to paramecia all doses are massive.

"Therefore," explained Calhoun to a watching and inquisitive Murgatroyd, "I act more like an alchemist than a sane man. I feel apologetic, Murgatroyd. I am embarrassed to make decoctions and to mix them with synthesized ditch-water. But what else can I do? I have to identify the cause of the plague here, without having contact with a single patient because Doctor Kelo . . ."

He shrugged and continued his activities. He was making solutions, decoctions, infusions of every kind of foodstuff the food shop he'd burglarized contained. The plague was not caused by an agent itself in infections. It was caused by something which allowed infections to thrive unhindered in human bodies. So Calhoun made soups of meat, all the kinds of meat, of grain and grain products, and vegetables taken from their transparent coverings. Even such items as sugar, salt, pepper and coffee were included.

Those solutions went upon microscope slides, one by one. With each, in turn, Calhoun mingled the decoction of rotting vegetation which was, apparently, as well-suited for his research as stagnant water from a scummy pond. The animalcules of the decoction appreciated their divers food supplies. They fed. They throve. Given time, they would have multiplied prodigiously.

Eventually Calhoun came to the solution of coffee. He mixed it with his experimental microscopic-animal zoo, and the paramecia died. Rotifers ceased to whirl and dart about upon their sub-miniature affairs. When an infusion of coffee from the food shop was added to the liquid environment of one-celled animals, they died.

Calhoun checked. It was so. He made an infusion of

coffee from the Med Ship's stores. It was not so. Coffee from the ship was not fatal to paramacia. Coffee from the shop was. But it would not follow that coffee from the shop would be fatal to humans. The alcoholic content of beer is fatal to paramacia. Wine is a fair antiseptic. No! The food store coffee could very well be far less toxic than the wildest of mouthwashes, and still kill the contents of Calhoun's ditch-water zoo.

However, the point was that something existed which allowed infections to thrive unhindered in human bodies. Something destroyed the body's defenses against infections. Nothing more would be needed to make the appearance of a plague. Every human being carries with him the seeds of infection, from oral bacteria to intestinal flora, and even often streptococci in the hair-follicles of the skin. Destroy the body's means of defense and anyone was bound to develop one of the diseases whose sample bacteria he carries about with him.

Instantly one ceased to think of the plague on Kryder II—and Castor IV before it—instantly one ceased to think of the epidemic as an infection miraculously spreading without any germ or bacterium or virus to carry it, instantly one thought of it as a toxin only, a poison only, a compound as monstrously fatal as the toxin of—say—the bacillus *Clostridium botulinum*. Immediately everything fell into place. The toxin that could simulate a plague could be distributed on a foodstuff: grain or meat or neatly packaged coffee. It would be distributed in such dilution that it was harmless. It would not be detected by any culture-medium process. In such concentration as humans would receive, it would have one effect, and one effect only. It would hinder the body's formation of antibodies. It would prevent the production of those compounds which destroy infective agents to which human beings are exposed. It would simply make certain that no infection would be fought. Antibodies introduced from outside could cure a disease the body could not resist, but there would always be other diseases. . . . Yet, in a concentration greater than body-fluids could contain, it killed the creatures that thrived in ditch-water.

Calhoun consulted the slip of paper the computer had printed out for him. He went down to the ship's stores. A Med Ship carries an odd assortment of supplies. Here were the basic compounds from which an unlimited number of other compounds could be synthesized. With the com-

puter-slip for a prescription form, he picked out certain ones. He went back to the ditch-water samples presently. He worked very painstakingly. Presently, he had a whitish powder. He made a dilute—a very dilute solution of it. He added that solution to ditch-water. The paramecia and rotifers and other tiny creatures swam about in bland indifference. He put in a trace of coffee decoction. Presently, he was trying to find out how small a quantity of his new solution, added to the coffee infusion, made it harmless to paramecia.

It was not an antidote to the substance the coffee contained. It did not counter the effects of that monstrously toxic substance, but it combined with that substance. It destroyed it; it was the answer to the plague on Kryder II.

It was broad daylight when he'd finished the horribly tedious detail-work the problem had required. In fact, it was close to sundown. He said tiredly to Murgatroyd, "Well, we've got it!"

Murgatroyd did not answer. Calhoun did not notice for a moment or so. Then he jerked his head about.

Murgatroyd lay on the Med Ship floor, his eyes half-closed. His breath came in quick, shallow pantings.

He'd eaten coffeebeans when they fell on the floor of the control-room. Calhoun picked him up, his lips angrily compressed. Murgatroyd neither resisted nor noticed. Calhoun examined him with a raging, painstaking care.

Murgatroyd was ill. He came of a tribe which was never sick of any infectious disease; they reacted with explosive promptness to any trace of contagion and produced antibodies which would destroy any invading pathogen. His digestive system was normally no less efficient, rejecting any substance which was unwholesome. But the toxic compound which caused the plague on Kryder II was not unwholesome in any direct sense. It did not kill anybody, by itself. It simply inhibited, it prevented, the formation of those antibodies which are a creature's defense against disease.

Murgatroyd had a fully developed case of pneumonia. It had developed faster in him than in a human being. It was horribly more severe. He'd developed it from some single *diplococcus pneumonia* upon his fur, or perhaps on Calhoun's garments, or possibly from the floor or wall of the Med Ship. Such microorganisms are everywhere. Humans and animals are normally immune to any but massive

infection. But Murgatroyd was at the very point of death from a disease his tribe normally could not—could not!—contract.

Calhoun made the tests required to make him absolutely certain. Then he took his new solution and prepared to make use of it.

"Fortunately, Murgatroyd," he said grimly, "we've something to try for this situation. Hold still!"

VI

MURGATROYD sipped a cup of coffee with infinite relish. He finished it. He licked the last drop. He offered it to Calhoun and said inquiringly, "*Chee?*"

"It probably won't hurt you to have one more cup," said Calhoun. He added irrelevantly, "I'm very glad you're well, Murgatroyd!"

Murgatroyd said complacently, "*Chee-chee!*"

Then the space communicator said metallically:

"Calling Med Ship! Calling Med Ship! Calling Med Ship Esclipus Twenty! Ground calling Esclipus Twenty!"

The Med Ship was then in orbit around Kryder II. It was a sound, high orbit, comfortably beyond atmosphere. Calhoun was officially waiting for word of how his communication and instruction to the authorities aground had turned out. He said, "Well?"

"I'm the Planetary Health Minister," said a voice. Somehow it sounded infinitely relieved. *"I've just had reports from six of our hospitals. They check with what you told us. The paramecia test works. There were a number of different foods—ah—contaminated at their packaging-points, so that even if someone had identified one food as the cause of the plague in one place, in another area it wouldn't be true. It was clever! It was damnably clever! And of course we've synthesized your reagent and tried it on laboratory animals we were able—by your instructions—to give the plague."*

"I hope," said Calhoun politely, "that the results were satisfactory."

The other man's voice broke suddenly.

"One of my children . . . he will probably recover, now. He's weak. He's terribly weak! But he'll almost certainly live, now that we can protect him from reinfection. We've started planet-wide use of your reagent."

"Correction," said Calhoun. "It's not my reagent. It is a perfectly well-known chemical compound. It's not often used, and perhaps this is its first use medically, but it's been known for half a century. You'll find it mentioned . . ."

The voice at the other end of the communication-link said fiercely:

"You will excuse me if I say nonsense! I wanted to report that everything you've told us has proved true. We have very many desperately ill, but new patients have already responded to medication to counter the—contamination of food they'd taken. They've gotten thoroughly well of normal disease and haven't developed others. Our doctors are elated. They are convinced. You can't have any idea how relieved . . ."

Calhoun glanced at Murgatroyd and said dryly, "I've reason to be pleased myself. How about Doctor Kelo and his friends?"

"We'll get him! He can't get off the planet, and we'll find him! There's only one ship aground at the spaceport; it came in two days ago. It's stayed in port under self-quarantine at our request. We've instructed it not to take anyone aboard. We're chartering it to go to other planets and buy foodstuffs to replace the ones we're testing and destroying."

Calhoun, stroking Murgatroyd, said more dryly than before, "I wouldn't. You'd have to send currency to pay for the stuff you want to import. On two previous occasions very, very large sums gathered for that purpose have disappeared. I'm no policeman but that *could* be the reason for the plague. There are some people who might start a plague for the express purpose of being entrusted with some scores of millions of credits. . . ."

There was silence at the other end of the conversation. Then a man's voice, raging, *"If that's it!"*

Calhoun broke in.

"In my orbit I'll be below your horizon in minutes. I'll call back. My orbit's very close to two hours duration."

"If that's it," repeated the voice, raging, *"We'll . . ."*

There was silence. Calhoun said very cheerfully, "Murgatroyd, I'm good at guessing the way a relatively honest

man's mind works. If I'd told them earlier that the plague victims were murdered, they'd have discounted the rest of what I had to say. But I'm learning the way a criminal's mind works too! It takes a criminal to think of burning down a house to cover up the fact that he robbed it. It takes a criminal to think of killing a man for what he may carry in his pockets. It would take a criminal to start a plague so he can gather money to steal, under the pretense that he's going to use it to buy unpoisoned food to replace the food he's poisoned. I had trouble understanding that!"

Murgatroyd said, "*Cheel*"

He got up. He walked in a rather wobbly fashion as if testing his strength. He came back and nestled against Calhoun. Calhoun petted him. Murgatroyd yawned. He'd been weakened by his illness. He still didn't understand it. *Tormals* are not accustomed to being ill.

"Now," said Calhoun reflectively, "I make a guess at how certain criminal minds will work if they eavesdropped just then. We've spoiled their crime on Kryder II. They'd put a lot of time and trouble into committing it. Now they've had their trouble and committed their murders for nothing. I think, I *think* they'll be angry. With me."

He settled Murgatroyd comfortably. He went about the ship stowing things away. The samples of ditch-water and of foodstuffs he placed so no shock or sudden acceleration could spill them. He made sure there were no loose objects about the control-room. He went down below and made especially sure that the extra plastic-sealed control-central unit was properly stowed, and that the spacesuit worn by one of the two men to board the Med Ship at breakout was suitably held fast. They'd be turned over to the laboratories at Headquarters. If carefully disassembled the control-central unit would give positive proof that a certain man in the Headquarters technical staff had installed it. Suitable measures would be taken. The spacesuit would identify the man now at the bottom of a rocky crevasse on an icy, uninhabited world.

By the time Calhoun's preparations were finished, the ship had nearly completed its orbital round. Calhoun put Murgatroyd in his cubbyhole. He fastened the door so the little animal couldn't be thrown out. He went to the pilot's chair and strapped in.

Presently he called, "*Med Ship Esclipus Twenty calling ground! Med Ship calling ground!*"

An enraged voice answered immediately.

"Ground to Med Ship! You were right! The ship in the spaceport lifted off on emergency-rockets before we could stop it! It must have listened in when you talked to us before! It got below the horizon before we could lock on!"

"Ah!" said Calhoun comfortably. "And did Doctor Kelo get aboard?"

"He did!" raged the voice. *"He did! It's inexcusable! It's unbelievable! He did get aboard and we moved to seize the ship and its rockets flamed and it got away!"*

"Ah!" said Calhoun, again comfortably. "Then give me coordinates for landing."

He had them repeated. Of course, if someone were eavesdropping . . . but he shifted the Med Ship's orbit to bring him to rendezvous at a certain spot at a certain time, a certain very considerable distance out from the planet.

"Now," he said to Murgatroyd, "we'll see if I understand the psychology of the criminal classes, in fact . . ."

Then he remembered that Murgatroyd was locked in his cubbyhole. He shrugged. He sat very alertly in the pilot's chair while the planet Kryder II revolved beneath him.

There was silence except for those minute noises a ship has to make to keep from seeming like the inside of a tomb. Murmurings. Musical notes. The sound of traffic. All very faint but infinitely companionable.

The needle of the nearest-object dial stirred from where it had indicated the distance to the planet's surface. Something else was nearer. It continued to approach. Calhoun found it and swung the Med Ship to face it, but he waited. Presently, he saw an infinitesimal sliver of reflected sunlight against the background of distant stars. He mentally balanced this fact against that, this possibility against that.

He flicked on the electron telescope. Yes. There were minute objects following the other ship. More of them appeared, and still more. They were left behind by the other ship's acceleration, but they spread out like a cone of tiny, deadly, murderous missiles. They were. If any one crashed into the Med Ship it could go clear through from end to end.

This was obviously the ship that had placed a man aboard the Med Ship to impersonate Calhoun aground. It was the ship whose company was ultimately responsible for the plague on Kryder II, and before that on Castor IV, and for another before that. It had been aground to receive, at a

suitable moment, very many millions of credits in currency to pay for unpoisoned foodstuffs for Kryder II. Through Calhoun, it had had all its trouble for nothing. It came to destroy the Med Ship as merited if inadequate punishment.

However, Calhoun found himself beautifully confident in his own competence. He was headed, of course, for a ship that meant to destroy him. It tossed out missiles to accomplish that purpose. Dropping behind as they did, the effect was of the other ship towing a cone-shaped net of destruction.

So Calhoun jammed down his rocket-controls to maximum acceleration and plunged toward it. It was a ship guided by criminals, with criminal psychology. They couldn't understand and at first couldn't believe that Calhoun—who should be their victim—would think of anything but attempts to escape. But presently it was borne upon them that he seemed to intend to ram them in mid-space.

The other ship swerved. Calhoun changed course to match. The other ship wavered. Its pilot couldn't understand. He'd lost the initiative. The Med Ship plunged for the very nose of the other vessel. They moved toward each other with vastly more than the speed of rifle-bullets. At the last instant the other ship tried crazily to sheer off. At that precise moment Calhoun swung the Med Ship into a quarter-turn. He cut his rockets and the *Esclipus Twenty* plunged ahead, moving sidewise, and then Calhoun cut in his rockets again. Their white-hot flames, glittering through a quarter-mile of space, splashed upon the other ship. They penetrated. They sliced the other ship into two ragged and uneven halves, and those two halves wallowed onward.

The communicator chattered:

"Calling Med Ship! Calling Med Ship! What's happened?"

At that time Calhoun was too busy to reply. The Med Ship was gaining momentum away from the line of the other ship's course, around which very many hurtling objects also moved. They would sweep through the space in which the other ship had died. Calhoun had to get away from them.

He did. Minutes later he answered the still-chattering call from the ground.

"There was a ship," he said evenly, "some ship which tried to smash me out here. But something seems to have happened to it. It's in two parts now, and it will probably

crash in two pieces somewhere aground. I don't think there will be any survivors. I think Doctor Kelo was aboard."

The voice aground conferred agitatedly with others. Then it urgently requested Calhoun to land and receive the gratitude of people already recovering from the virulent pestilence. Calhoun said politely, "My *tormal* has been ill. It's unprecedented. I need to take him back to Headquarters. I think I'm through here, anyhow."

He aimed the Med Ship, while voices made urgent official noises from the planet. He aimed very carefully for the sun around which the planet which was the Med Service Headquarters revolved. Presently he pushed a button, and the Med Ship did something equivalent to making a hole, crawling into it, and pulling the hole in after itself. In fact, it went into overdrive. It sped on toward Headquarters at many times the speed of light, nestled in that cocoon of stressed space which was like a private sub-cosmos of its own.

Calhoun said severely, when matters settled down, "Three weeks of peace and quiet in overdrive, Murgatroyd, will be much better for you than landing on Kryder II and being fed to bursting with sweet cakes and coffee! I tell you so as your physician!"

"*Chee*," said Murgatroyd dolefully. "*Chee-chee-chee!*"
The Med Ship drove on.

RIBBON IN THE SKY

I

"An error is a denial of reality, but mistakes are mere mental malfunctionings. In an emergency, a mistake may be made because of the need for precipitate action. There is no time to choose the best course; something must be done at once. Most mistakes, however, are made without any much exterior pressure. One accepts the first-imagined solution without examining it, either out of an urgent desire to avoid the labor of thinking, or out of impassioned reluctance to think about the matter at hand when prettier or more pleasurable other things can be contemplated. . . ."

The Practice of Thinking. Fitzgerald.

IT TURNED OUT that somebody had punched the wrong button in a computer. It was in a matter in which mistakes are not permissible, but just as nothing can be manufactured without an ordinary hammer figuring somewhere in the making or the making-ready-to-make, so nothing can be done without a fallible human operator at some stage of the proceedings. And humans make mistakes casually, offhandedly, with impartial lack of either malice or predictability, so . . .

Calhoun heard the tape-speaker say, "*When the gong sounds, breakout will follow in five seconds.*" Then it made solemn ticking noises while Calhoun yawned and put aside the book, "*The Practice of Thinking.*" He'd been studying. Study was a necessity in his profession. Besides, it helped to pass the time in overdrive. He went to the control-desk and strapped in. Murgatroyd the *tormal* uncoiled his tail from about his nose and stood up from where he was catching twenty winks. He padded to the place under Calhoun's chair where there were things to grab hold of if necessary, with one's four black paws and prehensile tail.

"*Chee,*" said Murgatroyd conversationally, in his shrill treble.

"I agree," Calhoun told him gravely. "Stone walls do not a prison make, nor Med Ship hulls a cage. But it will be good to get outside for a change."

The tape-speaker ticked and tocked and ticked and tocked. There was the sound of a gong. A voice said measuredly, "*Five-four-three-two-one.*"

The ship came out of overdrive. Calhoun winced and swallowed. Nobody ever gets used to going into overdrive or coming out of it. One is hideously dizzy for an instant, and his stomach has a brief but violent urge to upchuck, and no matter how often one has experienced it, it is necessary to fight a flash of irrational panic caused by the two sensations together.

After an instant Calhoun stared about him as the vision-screens came to life. They showed the cosmos outside the Med Ship. It was a perfectly normal cosmos—not at all the cosmos of overdrive—but it looked extremely wrong to Calhoun. He and Murgatroyd and the Med Ship were in emptiness. There were stars on every hand, and they were of every conceivable color and degree of brightness. But every one of them was a point of light, and a point only.

This, obviously, was not what he'd expected. These days ships do not stop to view the universe from the monstrous loneliness which is Between-the-Stars. All ships go into overdrive as near their port of departure as they can. Usually, it is something like five or six planetary diameters out from the local spaceport. All ships come out of overdrive as near their destinations as computation makes possible. They do not stop to look at scenery on the way. It isn't good for humans to look at stars when there are only stars to see. The sight has a tendency to make them feel small—too

small. Men have been known to come out of such an experience gibbering.

Calhoun scowled at the sight of Between-the-Stars. This was not good. But he wasn't frightened—not yet. There should have been a flaming sun somewhere nearby, and there should have been bright crescents or half-disks or mottled cloudy plants swimming within view. The sun should have been the star Merida, and Calhoun should land in commonplace fashion on Merida II and make a routine planetary health check on a settled, complacent population, and presently he should head back to Med Headquarters with a report containing absolutely nothing of importance. However, he couldn't do any of these things. He was in purely empty space. It was appalling.

Murgatroyd jumped up to the arm of the control-chair, to gaze wisely at the screens. Calhoun continued to scowl. Murgatroyd imitated him with a *tormal's* fine satisfaction in duplicating a man's actions. What he saw meant nothing to him, of course. But he was moved to comment.

"Chee," he said shrilly.

"To be sure," agreed Calhoun distastefully. "That is a very sage observation, Murgatroyd. Though I deplore the situation that calls for it. Somebody's bilged on us."

Murgatroyd liked to think that he was carrying on a conversation. He said zestfully, "*Chee-chee! Chee-chee-chee!*"

"No doubt," conceded Calhoun. "But this is a mess! Hop down and let me try to get out of it."

Murgatroyd disappointedly hopped to the floor. He watched with bright eyes as Calhoun annoyedly went to the emergency equipment locker and brought out the apparatus designed to take care of problems like this. If the situation wasn't too bad, correcting it should be simple enough. If it was too bad, it could be fatal.

The average separation of stars throughout the galaxy, of course, is something like four or five light-years. The distance between Sol-type stars is on an average very much higher, and with certain specific exceptions habitable planets are satellites of Sol-type suns. But only a fraction of the habitable planets are colonized, and when a ship has traveled blind, in overdrive, for two months or more, its pilot cannot simply look astern and recognize his point of departure. There's too much scenery in between. Further, nobody can locate himself by the use of star-maps unless he knows

where something on the star-map is with reference to himself. This makes a star-map not always useful.

The present blunder might not be serious. If the Med Ship had come out into normal space no more than eight to ten light-years from Merida, Calhoun might identify that sun by producing parallax. He could detect relative distances for a much greater range. However, it was to be hoped that his present blunder was small.

He got out the camera with its six lenses for the six vision-screens which showed space in all directions. He clamped it in place and painstakingly snapped a plate. In seconds he had everything above third magnitude faithfully recorded in its own color, and with relative brightnesses expressed in the size of the dots of tint. He put the plate aside and said:

"Overdrive coming, Murgatroyd."

He pressed the short-hop button and there was dizziness and nausea and a flash of fear—all three sensations momentary. Murgatroyd said, "*Chee*," in a protesting tone, but Calhoun held down the button for an accurate five minutes. He and Murgatroyd gulped together when he let up the button again and all space whirled and nausea hit as before. He took another plate of all the heavens, made into one by the six-lensed camera. He swung the ship by ninety degrees and pressed the short-hop button a second time; more dizziness, panic and digestive revolt followed. In five minutes it was repeated as the ship came out to normal space yet again.

"*Chee-chee!*" protested Murgatroyd. His furry paws held his round little belly against further insult.

"I agree," said Calhoun. He exposed a third film. "I don't like it either. But I want to know where we are, if anywhere."

He set up the comparator and inserted the three plates. Each had images of each of the six vision-screens. When the instrument whirled, each of the plates in turn was visible for part of a second. Extremely remote stars would not jiggle perceptibly—would not show parallax—but anything within twenty light-years should. The jiggling distance could be increased by taking the plates still farther apart. This time, though, there was one star which visibly wavered in the comparator. Calhoun regarded it suspiciously.

"We're Heaven knows where," he said dourly. "Somebody really messed us up! The only star that shows parallax isn't

Merida. In fact, I don't believe in it at all. Two plates show it as a Sol-class sun and the third says it's a red dwarf!"

On the face of it, such a thing was impossible. A sun cannot be one color as seen from one spot, and another color seen from another. Especially when the shift of angle is small.

Calhoun made rough computations. He hand-set the overdrive for something over an hour's run in the direction of the one star-image which wobbled and thereby beckoned. He threw the switch. He gulped, and Murgatroyd acted for a moment as if he intended to yield unreservedly to the nausea of entering overdrive, but he refrained.

There was nothing to do but kill time for an hour. There was a microreel of starplates, showing the heavens as photographed with the same galactic coordinates from every visited Sol-class star in this sector of the galaxy. Fewer than one in forty had a colonized planet, but if the nearest had been visited before, and if the heavens had been photographed there, by matching the stars to the appropriate plate he could find out where he was. Then a star-map might begin to be of some use to him. But he had still to determine whether the error was in his astrogation unit, or in the data fed to it. If the first he'd be very bad off indeed. If the second he could still be in a fix. But there was no point in worrying while in overdrive. He lay down on his bunk and tried to concentrate again on the book he'd laid aside.

"Human error, moreover," he read, "is never purely random. The mind tends to regard stored data as infallible and to disregard new data which contradicts it. . . ." He yawned, and skipped. ". . . So each person has a personal factor of error which is not only quantitative but qualitative. . . ."

He read on and on, only half absorbing what he read. A man who has reached the status of a Med Ship man in the Interstellar Medical Service hasn't finished learning. He's still away down the ladder of rank. He has plenty of studying before him before he gets very far.

The tape-speaker said, *"When the gong sounds, break-out will be five seconds off."* It began to tick-tock, slowly and deliberately. Calhoun got into the control-seat and strapped in. Murgatroyd said peevishly, *"Chee!"* and went to position underneath the chair. The voice said, *"Five-four-three-two-one."*

The little Med Ship came out of overdrive, and instant-

ly its emergency-rockets kicked violently and Murgatroyd held desperately fast. Then the rockets went off. There'd been something unguessable nearby, perhaps cometary debris at the extremist outer limit of a highly eccentric orbit. Now there was a star-field and a sun within two light-hours. If Calhoun had stared, earlier, when there was no sun in sight at all, now he gazed blankly at the spectacle before him.

There was a sun off to starboard. It was a yellow sun, a Sol-type star with a barely perceptible disk. There were planets. Calhoun saw immediately one gas-giant near enough to be more than a point, and a sliver of light which was the crescent of another more nearly in line toward the sun. But he gazed at a belt, a band, a ribbon of shining stuff which was starkly out of all reason.

It was a thin curtain of luminosity circling this yellow star. It was not a ring from the break-up of a satellite within Roche's Limit. There were two quite solid planets inside it and nearer to the sun. It was a thin, wide, luminous golden ribbon which looked like something that needed a flat iron to smooth it out. It looked somewhat like an incandescent smoke-ring. It was not smooth. It had lumps in it. There were corrugations in it. An unimaginable rocket with a flat exhaust could have made it while chasing its tail around the sun. But that couldn't have happened, either.

Calhoun stared for seconds.

"Now," he said, "now I've seen everything!" Then he grunted as realization came. "Mmmmh! We're all right, Murgatroyd! It's not our computers that went wrong. Somebody fed them wrong data. We arrived where we aimed for, and there'll be a colonized planet somewhere around."

He unlimbered the electron telescope and began a search; he couldn't resist a closer look at the ribbon in space. It had exactly the structure of a slightly wobbly wrinkled belt without beginning or end. It had to be a complex of solid particles, of course, and an organization of solid particles cannot exist in space without orbital motion. However, orbits would smooth out in the course of thousands of revolutions around a primary. This was not smoothed out. It was relatively new.

"It's sodium dust," said Calhoun appreciatively. "Or maybe potassium. Hung out there on purpose. Particles small enough to have terrific surface and reflective power, and

big enough not to be pushed out of orbit by light-pressure. Clever, Murgatroyd! At a guess it'll have been put out to take care of the climate on a planet just inside it. Which would be—there! Let's go look!"

He was so absorbed in his admiration that the almost momentary overdrive-hop needed for approach went nearly unnoticed. He even realized—his appreciation increasing—that this cloud of tiny particles accounted for the red-dwarf appearance on one of the plates he'd taken. Light passing through widely dispersed very small particles turns red. From one position, he'd photographed moving through this dust-cloud.

The ribbon was a magnificent idea, the more magnificent because of its simplicity. It would reflect back otherwise wasted sun-heat to a too-cold planet and make it warmer. There was probably only an infinitesimal actual mass of powder in the ring, at that. Tens or scores of tons in all, hardly more.

The planet for which it had been established was the third world out. As is usual with Sol-class systems, the third planet's distance from the sun was about a hundred twenty million miles. It had ice-caps covering more than two-thirds of its surface. The sprawling white fingers of glaciation marked mountain chains and highlands nearly to the equator. There was some blue sea, and there was green vegetation in a narrow belt of tropicity.

Calhoun jockeyed the Med Ship to position for a landing call. This was not Merida II; there should be a colony here! That glowing ribbon had not been hung out for nothing.

"Med Ship *Esclipus Twenty*," he said confidently into the space-phone mike. "Calling ground. Requesting coordinates for landing. My mass is fifty tons. Repeat, five-oh tons. Purpose of landing, to find out where I am and how to get where I belong."

There was a clicking. Calhoun repeated the call. He heard murmurings which were not directed into the transmitter on the planet. They were speaking in the transmitter-room aground. He heard an agitated: "*How long since a ship landed?*" Another voice was saying fiercely, "*Even if he doesn't come from Two City or Three City, who knows what sickness . . .*" There was sudden silence, as if a hand had been clapped over the microphone below. Then a long pause. Calhoun made the standard call for the third time.

"Med Ship Esclipus Twenty," said the space-phone speaker grudgingly, *"you will be allowed to land. Take position."* Calhoun blinked at the instructions he received. The coordinates were not the normal galactic ones. They gave the local time at the spaceport, and the planetary latitude. He was to place himself overhead. He could do it, of course, but the instructions were unthinkable. Galactic coordinates had been used ever since Calhoun knew anything about such matters. But he acknowledged the instructions. Then the voice from the speaker said truculently: *"Don't hurry! We might change our minds! And we have to figure settings for an only fifty-ton ship, anyhow."*

Calhoun's mouth dropped open. A Med Ship was welcome everywhere, these days. The Interstellar Medical Service was one of those over-worked, understaffed, kicked-around organizations that are everywhere taken for granted. Like breathable air, nobody thought to be grateful for it, but nobody was suspicious of it, either.

The suspicion and the weird coordinates and the ribbon in space combined to give Calhoun a highly improbable suspicion. He looked forward with great interest to this landing. He had not been ordered to land here, but he suspected that a Med Ship landing was a long, long time overdue.

"I forgot to take star-pictures," he told Murgatroyd, "but a ribbon like this would have been talked about if it had been reported before. I doubt star-pictures would do us any good. The odds are that our only chance to find out where we are is to ask." Then he shrugged his shoulders. "Anyhow this won't be routine!"

"Cheel!" agreed Murgatroyd, profoundly.

II

"An unsolvable but urgent problem may produce in a society, as in an individual, an uncontrollable emotional tantrum, an emotional denial of the problem's existence, or purposive research for a solution. In olden days, the first reaction produced mass-tantrums then called "wars." The second produced dogmatic ideolo-

gies. The third produced modern civilization. All three reactions still appear in individuals. If the first two should return to societies, as such . . .”

The Practice of Thinking. Fitzgerald.

THE DESCENT, at least, was not routine. It was nerve-racking. The force field from the planet's giant steel landing-grid reached out into space and fumbled for the Med Ship. That was clumsily done. When it found the ship, it locked on, awkwardly. The rest was worse. Whoever handled the controls, aground, was hopelessly inept. Once the Med Ship's hull-temperature began to climb, and Calhoun had to throw on the space-phone and yelp for caution. He did not see as much of the nearing planet as he'd have liked.

At fifty miles of height, the last trace of blue sea vanished around the bulge of the world. At twenty miles, the mountain chains were clearly visible, with their tortured, winding ice rivers which were glaciers. At this height three patches of green were visible from aloft. One, directly below, was little more than a mile in diameter and the landing-grid was its center and almost its circumference. Another was streaky and long, and there seemed to be heavy mist boiling about it and above it. The third was roughly triangular. They were many miles apart. Two of them vanished behind mountains as the ship descended.

There were no cities in view. There were no highways. This was an ice world with bare ground and open water at its equator only. The spaceport was placed in a snow ringed polar valley.

Near landing, Calhoun strapped in because of the awkwardness with which the ship was lowered. He took Murgatroyd on his lap. The small craft bounced and wobbled as unskilled hands let it down. Presently, Calhoun saw the angular girders of the landing-grid's latticed top rise past the opened ports. Seconds later, the Med Ship bumped and slid and bounced heart-stoppingly. Then it struck ground with a violent jolt.

Calhoun got his breath back as the ship creaked and adjusted itself to rest on its landing-fins, after some months in space.

“Now,” said the voice in the space-phone speaker—but it sounded as if it were trying to conceal relief—“*now stay in your ship. Our weapons are bearing on you. You may not come out until we've decided what to do about you.*”

Calhoun raised his eyebrows. This was very unusual indeed. He glanced at the external-field indicator. The landing-grid field was off. So the operator bluffed. In case of need Calhoun could blast off on emergency rockets and probably escape close-range weapons anyhow—if there were any—and he could certainly get around the bulge of the world before the amateur at the grid's controls could lock on to him again.

"Take your time," he said with irony. "I'll twiddle my fingers. I've nothing better to do!"

He freed himself from his chair and went to a port to see. He regarded the landscape about him with something like unbelief.

The landing-grid itself was a full mile across and half as high. It was a vast, circular frame of steel beams reaching heavenward, with the curiously curving copper cables strung as they had to be to create the highly special force field which made space transportation practical. Normally, such gigantic structures rose in the centers of spaceport cities. They drew upon the planet's ionosphere for power to lift and land cargo-ships from the stars, and between-times they supplied energy for manufactures and the operation of cities. They were built, necessarily, upon stable bed-rock formations, and for convenience were usually located where the cargos to be shipped would require least surface transportation.

But here, there was no city. There was perhaps a thousand acres of greenness, a mere vague rim around the outside of the grid. There was a control-room building to one side, of course. It was solidly made of stone, but there had been an agglomeration of lean-tos added to it with slanting walls and roofs of thin stratified rock. There were cattle grazing on the green grass. The center of the grid was a pasture!

Save for the clutter about the grid-control building there were no structures, no dwellings, no houses or homes anywhere in view. There was no longer even a highway leading to the grid. Calhoun threw on the outside microphones and there was no sound except a thin keening of wind in the steelwork overhead. But presently one of the cattle made a mournful bellowing sound.

Calhoun whistled as he went from one port to another. "Murgatroyd," he said meditatively on his second round, "you observe—if you observe—one of the consequences of human error. I still don't know where I am, because I

doubt that starplates have ever been made from this solar system, and I didn't take one for comparison anyhow. But I can tell you that this planet formerly had a habitability rating of something like oh point oh, meaning that if somebody wanted to live here it would be possible but it wouldn't be sensible. Although people did come here, and it was a mistake."

He stared at a human figure, far away. It was a woman, dressed in shapeless, badly draping garments. She moved toward a clump of dark-coated cattle and did something in their midst.

"The mistake looks pretty evident to me," added Calhoun. "I see some possibilities I don't like at all. There is such a thing as an isolation syndrome, Murgatroyd. A syndrome is a complex of pathological symptoms which occur together as a result of some morbid condition. To us humans, isolation is morbid. You help me to endure it, Murgatroyd, but I couldn't get along with only even your society—charming as it is—for but so long. A group of people can get along longer than a single man, but there is a limit for any small-sized group."

"Chee," said Murgatroyd.

"In fact," said Calhoun, frowning, "there's a specific health problem involved, which the Med Service recognizes. There can be partial immunity, but there can be some tricky variations. If we're up against a really typical case we have a job on hand. And how did these people get that dust-ring out in space? They surely didn't hang it out themselves!"

He sat down and scowled at his thoughts. Presently, he rose again and once more surveyed the icy landscape. The curious green pasture about the landing-grid was highly improbable. He saw glaciers overhanging this valley. They were giant ice rivers which should continue to flow and overwhelm this relatively sheltered spot. They didn't. Why not?

It was more than an hour before the space-phone clattered. When Calhoun threw the switch again a new voice came out of it. This was also a male voice, but it was high-pitched as if from tension.

"*We've been talking about you,*" said the voice. It quivered with agitation which was quite out of reason. "*You say you're Med Service. All right. Suppose you prove it!*" The landed Med Ship should be proof enough for any-

body. Calhoun said politely: "I have the regular identifications. If you'll go on vision I'll show you my credentials."

"Our screen's broken," said the voice, suspiciously. *"But we have a sick cow. It was dumped on us night before last. Cure her and we'll accept it as identification."*

Calhoun could hardly believe his ears. This was an emergency situation! The curing of a sick cow was considered more convincing than a Med Ship man's regular credentials! Such a scale of values hinted at more than a mere isolation syndrome. There were thousands of inhabited worlds, now, with splendid cities and technologies which most men accepted with the same bland confidence with which they looked for sunrise. The human race was civilized! Suspicion of a Med Ship was unheard of, but here was a world . . .

"Why—certainly," said Calhoun blankly. "I suppose I may go outside to—ah—visit the patient?"

"We'll drive her up to your ship," said the high, tense voice. *"And you stay close to it!"* Then it said darkly, *"Men from Two City sneaked past our sentries to dump it on us. They want to wipe out our herd! What kind of weapons have you got?"*

"This is a Med Ship!" protested Calhoun. "I've nothing more than I might need in an emergency!"

"We'll want them anyhow," said the voice. *"You said you need to find out where you are. We'll tell you, if you've got enough weapons to make it worthwhile."*

Calhoun drew a deep breath.

"We can argue that later," he said. "I'm just a trifle puzzled. But first things first. Drive your cow."

He held his head in his hands. He remembered to throw off the space-phone and said, "Murgatroyd, say something sensible! I never ran into anybody quite as close to coming apart at the seams as that! Not lately! Say something rational!"

Murgatroyd said, *"Chee?"* in an inquiring tone.

"Thanks," said Calhoun. "Thanks a lot."

He went back to the ports to watch. He saw men come out of the peculiar agglomeration of structures that had been piled around the grid's sturdy control-building. They were clothed in cloth that was heavy and very stiff, to judge by the way it shifted with its wearers' movements. Calhoun wasn't familiar with it. The men moved stolidly, on foot, across the incredible pasture which had been a landing-space for ships of space at some time or other.

They reached a spot where a dark animal form rested on the ground. Calhoun hadn't noticed it particularly. Cattle, he knew, folded their legs and lay down and chewed cuds. They existed nearly everywhere that human colonies had been built. On some worlds there were other domestic animals descended from those of Earth. Of course, there were edible plants and some wholesome animals which had no connection at all with humanity's remote ancestral home, but from the beginning human beings had been adjusted to symbiosis with the organic life of Earth. Foodstuffs of non-terrestrial origin could only supplement Earth food, of course. In some cases Earth foods were the supplements and local, non-terrestrial foodstuffs the staples. However, human beings did not thrive on a wholly un-Earthly diet.

The clump of slowly moving men reached the reclining cow. They pulled up stakes which surrounded her, and coiled up wire or cordage which had made the stakes into a fence. They prodded the animal. Presently, it lurched to its feet and swung its head about foolishly. They drove it toward the Med Ship.

Fifty yards away they stopped, and the outside microphones brought the sound of their voices muttering. By then Calhoun had seen their faces. Four of the six were bearded. The other two were young men. On most worlds men prided themselves that they needed to shave, but few of them omitted the practice.

These six moved hastily away, though the two younger ones turned often to look back. The cow, deserted, stumbled to a reclining position. It lay down, staring stupidly about. It rested its head on the ground.

"I go out now, eh?" asked Calhoun mildly.

"We're watching you!" grated the space-phone speaker.

Calhoun glanced at the outside temperature indicator and added a garment. He put a blaster in his pocket. He went out the exit-port.

The air was bitter cold, after two months in a heat-metered ship, but Calhoun did not feel cold. It took him seconds to understand why. It was that the ground was warm! Radiant heat kept him comfortable, though the air was icy. Heat elements underground must draw power from somewhere—the grid's tapping of the ionosphere and heating this pasture from underneath enables forage plants to grow here. They did. The cattle fed on them. There would be hydroponic gardens somewhere else, probably

underground. They would supply vegetable food in greater quantity. In the nature of things human beings had to have animal food in a cold climate.

Calhoun went across the pasture with the frowning snowy mountains all about. He regarded the reclining beast with an almost humorous attention. He did not know anything about the special diseases of domestic animals. He had only the knowledge required of a Med Ship man, but that should be adequate. The tense voice had said that this beast had been "dumped," to "wipe out" the local herd. So there "was" infection and there would be some infective agent.

He painstakingly took samples of blood and saliva. In a ruminant, certainly, any digestive-tract infection should show up in the saliva. He reflected that he did not know the normal bovine temperature, so he couldn't check it, nor the respiration. The Interstellar Medical Service was not often called on to treat ailing cows.

Back in the ship he diluted his samples and put traces in the usual nutrient solutions. He sealed up droplets in those tiny slides which let a culture be examined as it grows. His microscope, of course, allowed of inspection under light of any wave-length desired, and so yielded information by the frequency of the light which gave clearest images of different features of the microorganisms.

After five minutes of inspection he grunted and hauled out his antibiotic stores. He added infinitesimal traces of cillin to the culture-media. In the microscope, he watched the active microscopic creatures die. He checked with the other samples.

He went out to the listless, enfeebled animal. He made a wry guess at its body-weight. He used the injector. He went back to the Med Ship. He called on the space-phone.

"I think," he said politely, "that your beast will be all right in thirty hours or so. Now, how about telling me the name of this sun?"

The voice said sharply:

"There's a matter of weapons, too! Wait till we see how the cow does! Sunset will come in an hour. When day comes again, if the cow is better—we'll see!"

There was a click. The space-phone cut off.

Calhoun pulled out the log-mike. There was already an audio record of all ship-operations and communications. Now he added comments: a description of the ribbon in the sky, the appearance of the planet, and such con-

clusions as he'd come to. He ended: "The samples from the cow were full of a single coccus, which seemed to have no resistance to standard antibiotics. I pumped the beast full of cillin and called it a day. I'm concerned, though, because of the clear signs of an isolation syndrome here. They're idiotically suspicious of me and won't even promise a bargain, as if I could somehow overreach them because I'm a stranger. They've sentries out—they said somebody sneaked past them—against what I imagine must be Two City and Three City. I've an impression that the sentries are to enforce a quarantine rather than to put up a fight. It is probable that the other communities practice the same tactics, plus biological cold war if somebody did bring a sick cow here to infect and destroy the local herd. These people may have a landing-grid, but they've an isolation syndrome and I'm afraid there's a classic Crusoe health problem in being. If that's so, it's going to be nasty!"

He cut off the log. The classic Crusoe problem would be extremely awkward if he'd run into it. There was a legend about an individual back on old Earth who'd been left isolated on an island by shipwreck for half a lifetime. His name was given to the public-health difficulties which occurred when accidental isolations occurred during the chaotic first centuries of galactic migration. There was one shipwreck to which the name was first applied. The ship was missing, and the descendants of the crew and passengers were not contacted until three generations had passed. Larger-scale and worse cases occurred later, when colonies were established by entrepreneurs who grew rich in the establishment of the new settlements, and had no interest in maintaining them. Such events could hardly happen now, of course, but even a Crusoe condition was still possible in theory. It might exist here. Calhoun hoped not.

It did not occur to him that the affair was not his business because he hadn't been assigned to it. He belonged to the Med Service, and the physical well being of humans everywhere was the concern of that service. If people lived by choice in an inhospitable environment, that was not a Med man's problem, but anything which led to preventable deaths was. In a Crusoe colony there were plenty of preventable deaths!

He cooked a meal to have something to occupy his mind. Murgatroyd sat on his haunches and sniffed blissfully. Presently, Calhoun ate, and again presently darkness fell on this

part of the world. There were new noises, small ones. He went to look. The pasture inside the landing-grid was faintly lighted by the glowing ribbon in the sky. It looked like a many-times-brighter Milky Way. The girders of the landing-grid looked very black against it.

He saw a dark figure plodding away until he vanished. Then he reappeared as a deeper black against the snow beyond the pasture. He went on and on until he disappeared again. A long time later another figure appeared where he'd gone out of sight. It plodded back toward the grid. It was a different individual. Calhoun had watched a changing of sentries. Suspicion, hostility, the least attractive qualities of the human race, brought out by isolation.

There could not be a large population here, since such suspicions existed. It was divided into—most likely—three again, isolated communities. This one had the landing-grid, which meant power, and a space-phone but no vision-screen attached to it. The fact that there were hostile separate communities made the situation much more difficult, from a medical point of view. It multiplied the possible ghastly features which could exist.

Murgatroyd ate until his furry belly was round as a ball, and settled to stuffed slumber with his tail curled around his nose. Calhoun tried to read. But he was restless. His own time-cycle on the ship did not in the least agree with the time of daylight here on this planet. He was wakeful when there was utter quiet outside. Once one of the cattle made a dismal noise. Twice or three times he heard crackling sounds, like sharp detonations, from the mountains; they would be stirrings in the glaciers.

He tried to study, but painstaking analysis of the methods by which human brains defeated their own ends and came up with wrong answers was not appealing. He grew horribly restless.

It had been dark for hours when he heard rustling noises on the ground outside, through the microphones, of course. He turned up the amplification and made sure that it was a small party of men moving toward the Med Ship. From time to time they paused, as if in caution.

"Murgatroyd," he said dryly, "we're going to have visitors. They didn't give notice by space-phone, so they're unauthorized."

Murgatroyd blinked awake. He watched as Calhoun made

sure of the blaster in his pocket and turned on the log-mike. He said: "All set, Murgatroyd?"

Murgatroyd said "*Chee*" in his small shrill voice just as a soft and urgent knock sounded on the exit-lock door. It was made with bare knuckles. Calhoun grimaced and went into the lock. He undogged the door and began to open it, when it was whipped from his grasp and plunging figures pushed in. They swept him back into the Med Ship's cabin. He heard the lock door close softly. Then he faced five roughly, heavily clothed men who wore cloaks and mittens and hoods, with cloth stretched tightly across their faces below the eyes. He saw knives, but no blasters.

A stocky figure with cold gray eyes appeared to be spokesman.

"You're the man who got landed today," he said in a deep voice and with an effect of curtness. "My name's Hunt. Two City. You, a Med Ship man?"

"That's right," said Calhoun. The eyes upon him were more scared than threatening, all but the stocky man named Hunt. "I landed to find out where I was," he added. "The data-card for my astrogator had been punched wrong—what . . ."

"You know about sickness, eh?" demanded the stocky man evenly. "How to cure it and stop it?"

"I'm a Med Ship man," admitted Calhoun. "For whatever that may mean."

"You're needed in Two City," said the deep-voiced Hunt. His manner was purest resolution. "We came to get you. Get y'medicines. Dress warm. Load us down, if you like, with what you want to take. We got a sledge waiting."

Calhoun felt a momentary relief. This might make his job vastly easier. When isolation and fear brings a freezing of the mind against any novelty—even hope—a medical man has his troubles. But if one community welcomed him . . .

"*Cheel*" said Murgatroyd indignantly from overhead. Calhoun glanced up and Murgatroyd glared from a paw-hold near the ceiling. He was a peaceable animal. When there was scuffling he got out of the way. But now he chattered angrily. The masked men looked at him fearfully. Their deep-voiced leader growled at them.

"Just a animal." He swung back to Calhoun. "We got a need for you," he repeated. "We mean all right, and anything we got you can have if you want it. But you coming with us!"

"Are your good intentions," asked Calhoun, "proved by your wearing masks?"

"They're to keep from catchin' your sickness," said the deep voice impatiently. "Point to what you want us to take!"

Calhoun's feeling of encouragement vanished. He winced a little. The isolation syndrome was fully developed. It was a matter of faith that strangers were dangerous. All men were assumed to carry contagion. Once, they'd have been believed to carry bad luck. However, a regained primitiveness would still retain some trace of the culture from which it had fallen. If there were three settlements as the pasture lands seen from space suggested, they would not believe in magic, but they would believe in contagion. They might have, or once have had, good reason. Anyhow, they would fanatically refrain from contact with any but their own fellow citizens. Yet, there would always be troubles to excite their terrors. In groups of more than a very few there would always be an impulse against the isolation which seemed the only possible safety in a hostile world. The effectiveness of the counter-instinct would depend in part on communications, but the urge to exogamy can produce serious results in a small culture gone fanatic.

"I think," said Calhoun, "that I'd better come with you. But the people here have to know I've gone. I wouldn't like them to heave my ship out to space in pure panic because I didn't answer from inside it!"

"Leave a writing," said Hunt's deep voice, as impatiently as before. "I'll write it. Make them boil, they won't dare follow us!"

"No?"

"Think One City men," asked the stocky man scornfully, "think One City men will risk us toppling avalanches on them?"

Calhoun saw. Amid mountain country in a polar zone, travel would be difficult at best. These intruders had risked much to come here for him; they were proud of their daring. They did not believe that the folk of lesser cities—tribes—groups than theirs had courage like theirs. Calhoun recognized it as a part of that complex of symptoms which can begin with an epidemic and end with group-madness.

"I'll want this, and this, and that," said Calhoun. He wouldn't risk his microscope. Antibiotics might be useful. Antiseptics, definitely. His med-kit. . . . "That's all."

"Your blankets," said Hunt. "Y'want them too."

Calhoun shrugged. He clothed himself for the cold outside. He had a blaster in his pocket, but he casually and openly took down a blast-rifle. His captors offered no objection. He shrugged again and replaced it. Starting to take it was only a test. He made a guess that this stocky leader, Hunt, might have kept his community just a little more nearly sane than the group that had set him to the cure of a sick cow. He hoped so.

"Murgatroyd," he said to the *tormal* still clinging up near the control-room's top, "Murgatroyd, we have a professional call to make. You'd better come along. In fact, you must."

Murgatroyd came suspiciously down, and then leaped to Calhoun's shoulder. He clung there, gazing distrustfully about. Calhoun realized that his captors—callers—whatever they were—stayed huddled away from every object in the cabin. They fingered nothing. The scared eyes of most of them proved that it was not honesty which moved them to such meticulousness. It was fear. Of contagion.

"They're uncouth, eh?" said Calhoun sardonically. "But think, Murgatroyd, they may have hearts of gold! We physicians have to pretend to think so, in any case!"

"*Cheel*!" said Murgatroyd resentfully as Calhoun moved toward the lock.

III

"Civilization is based upon rational thought applied to thinking. But there can be a deep and fundamental error about purposes. It is simply a fact that the purposes of human beings are not merely those of rational animals. It is the profoundest of errors to believe otherwise, to consider, for example: that prosperity or pleasure or even survival cannot be priced so high that their purchase is a mistake."

The Practice of Thinking. Fitzgerald.

THERE WAS a sheet of paper fastened outside the combination lock of the Med Ship's exit port. It said that Calhoun had been taken away by men of Two City, to tend some

sick person. It said that he would be returned. The latter part might not be believed, but the Med Ship might not be destroyed. The colony of the landing-grid might try to break into it, but success was unlikely.

Meanwhile, it was an odd feeling to cross the grassy pasture land with hoar-frost crunching underfoot. The grid's steel girders made harsh lace of blackness against the sky, with its shining ribbon slashing across it. Calhoun found himself reflecting that the underground heat applied to the thousand-acre pasture had been regulated with discretion. There was surely power enough available from the grid to turn the area into a place of tropic warmth, in which only lush and thick-leaved vegetation could thrive. However, a storm from the frigid mountains would destroy such plants. Hardy, low-growing, semi-arctic grass was the only suitable ground cover. The iciest of winds could not freeze it so long as the ground was warmed.

Tonight's wind was biting. Calhoun had donned a parka of synthetic fur on which frost would not congeal at any temperature, but he was forced to draw fur before his face and adjust heated goggles before his eyes would stop watering. Yet in the three-quarter-mile trudge to the edge of the snow, his feet became almost uncomfortably warm.

That, though, ended where a sledge waited at the edge of the snow. Five men had forced themselves inside the Med Ship. A sixth was on guard beside the sledge. There had been no alarm. Now the stocky man, Hunt, urged him to a seat upon the sledge.

"I'm reasonably able-bodied," said Calhoun mildly.

"You don't know where we're going, or how," growled Hunt.

Calhoun got on the sledge. The runners were extraordinarily long. He could not see small details, but it appeared that the sledge had been made of extreme length to bridge crevasses in a glacier. There were long thin metal tubes to help. At the same time, it looked as if it could be made flexible to twist and turn in a narrow or obstacle-strewn path.

The six clumsily-clad men pushed it a long way, while Calhoun frowned at riding. Then Murgatroyd shivered, and Calhoun thrust him inside the parka. There Murgatroyd wriggled until his nose went up past Calhoun's chin and he could sniff the outside air. From time to time he withdrew his nose—perhaps with frost-crystals on it. But

always he poked his small black snout to sniff again. His whiskers tickled.

Two miles from the pastureland, the sledge stopped. One man fumbled somewhere behind Calhoun's seat and a roaring noise began. All six piled upon the long, slender snow-vehicle. It began to move. A man swore. Then, suddenly, the sledge darted forward and went gliding up a steep incline. It gathered speed. Twin arcs of disturbed snow rose up on either side, like bow-waves from a speeding water-skimmer. The sledge darted into a great ravine of purest white and the roaring sound was multiplied by echoes.

For better than half an hour, then, Calhoun experienced a ride which for thrills and beauty and hair-raising suspense made mere space-travel the stodgiest of transportation. Once the sledge shot out from beetling cliffs—all icy and glittering in the light from the sky—and hurtled down a slope of snow so swiftly that the wind literally whistled about the bodies of its occupants. Then the drive roared more loudly, and there was heavy deceleration, and abruptly the sledge barely crawled. The flexibility of the thing came into operation. Four of the crew, each controlling one segment of the vehicle, caused it to twist and writhe over the surface of a glacier, where pressure-ridges abounded and pinnacles of shattered, squeezed-up ice were not uncommon.

Once they stopped short and slender rods reached out and touched, and the sledge slid delicately over them and was itself a bridge across a crevasse in the ice that went down an unguessable distance. Then it went on and the rods were retrieved. Minutes later, the sledge-motor was roaring loudly, but it barely crawled up to what appeared to be a mountain crest—there were ranges of mountains extending beyond sight in the weird blue and golden skylight—and then there was a breathtaking dash and a plunge into what was incredibly a natural tunnel beside the course of an ice-river; abruptly, there was a vast valley below.

This was their destination. Some thousands of feet down in the very valley bottom there was a strange, two-mile-long patch of darkness. The blue-gold light showed no color there, but it was actually an artificially warmed pasture land like that within and about the landing-grid. From this dark patch vapors ascended, and rolled, and gathered to form a misty roof, which was swept away and torn to tatters by an unseen wind.

The sledge slowed and stopped beside a precipitous

upcrop of stone while still high above the valley bottom. A voice called sharply.

"It's us," growled Hunt's deep voice. "We got him. Everything all right?"

". . . Nol" rasped the invisible voice "They broke out—he broke out and got her loose, and they run off again. We shoulda killed 'em and had done with it!"

Everything stopped. The man on the sledge seemed to become still in the shock of pure disaster, pure frustration. Calhoun waited. Hunt was motionless. Then one of the men on the sledge spat elaborately. Then another stirred.

"Had your work for nothing," rasped the voice from the shadow. "The trouble that's started goes for nothing, tool"

Calhoun asked crisply, "What's this? My special patients ran away?"

"That the Med man we heard about?" The invisible speaker was almost derisive with anger. "Sure! They've run off, all right . . . man and girl together. After we made trouble with Three City by not killin' 'em and with One City by sneakin' over to get you! Three City men'll come boiling over. . . ." The voice raised in pitch, expressing scorn and fury. "Because they fell in love! We shoulda killed 'em right off or let 'em die in the snow like they wanted in the first place!"

Calhoun nodded almost imperceptibly to himself. When there is a syndrome forbidding association between societies, it is a part of the society's interior struggle against morbidity that there shall be forbidden romances. The practice of exogamy is necessary for racial health, hence there is an instinct for it. The more sternly a small population restricts its human contacts to its own members, the more repressed the exogamic impulse becomes. It is never consciously recognized for what it is. But especially when repressed, other-than-customary contacts trigger it explosively. The romantic appeal of a stranger is at once a wise provision of nature and a cause of incredible furies and disasters. It is notorious that spaceship crews are inordinately popular where colonies are small and strangers infrequent. It is no less notorious that a girl may be destitute of suitors on her own world, but has nearly her choice of husbands if she merely saves the ship-fare to another.

Calhoun could have predicted defiances of tradition and law and quarantine alike, as soon as he began to learn the state of things here. The frenzied rage produced by this

specific case was normal. Some young girl must have loved terribly, and some young man been no less impassioned, to accept expulsion from society on a world where there was no food except in hydroponic gardens and artificially warmed pastures. It was no less than suicide for those who loved. It was no less than a cause for battle among those who did not.

The deep-voiced Hunt said now, in leaden, heavy tones, "Cap it. This is my doing. It was my daughter I did it for. I wanted to keep her from dying. I'll pay for trying. They'll be satisfied in Three City and in One alike if you tell 'em it's my fault and I've been drove out for troublemaking."

Calhoun said sharply, "What's that? What's going on now?"

The man in the shadows answered, by his tone as much to express disgust as to give information. "His daughter Nym was on sentry-duty against Three City sneaks. They had a sentry against us. The two of 'em talked across the valley between 'em. They had walkies to report with. They used 'em to talk. Presently, she sneaked a vision-screen out of store. He prob'ly did, too. So presently they figured it was worth dyin' to die together. They run off for the hotlands. No chance to make it, o'course!"

The hotlands could hardly be anything but the warm equatorial belt of the planet.

"We should've let them go on and die," said the stocky Hunt, drearily. "But I persuaded men to help me bring 'em back. We were careful against sickness! We—I—locked them separate and I—I hoped my daughter mightn't die of the Three City sickness. I even hoped that young man wouldn't die of the sickness they say we have that we don't notice and they die of. Then we heard your call to One City. We couldn't answer it, but we heard all you said, even to the bargain about the cow. And—we'd heard of Med men who cured sickness. I hoped you could save Nym from dying of the Three City sickness or passing it in our city. My friends risked much to bring you here. However my daughter and the man have fled again."

"And nobody's goin' to risk any more!" rasped the voice from the shadow of the cliff. "We held a council! It's decided! They gone and we got to burn out the places they was in! No more! You don't head the Council any more, either! We decided that, too. And no Med man! The Council ruled it!"

Calhoun nodded yet again. It is a part of fear, elaborately to ignore everything that can be denied about the thing feared. Which includes rational measures against it. This was a symptom of the state of things which constituted a Med Service emergency, because it caused needless deaths.

Hunt made a gesture which was at once commanding and filled with despair.

"I'll take the Med Man back so One City can use him if they dare and not blame you for me taking him. I'll have to take the sledge, but he's used it so it'd have to be burned anyhow. You men be sure to burn your clothes. Three City'll be satisfied because I'm lost to balance for their man lost. The Med Man will tell One City I'm drove out. You've lost me and my daughter too, and Three City's lost a man. One City'll growl and threaten, but they win by this. They won't risk a showdown."

Silence again. As if reluctantly, one man of the party that had abducted Calhoun moved away from the sledge and toward the abysmally deep shadow of the cliff. Hunt said harshly: "Don't forget to burn your clothes! You others, get off the sledge. I'm taking the Med man back and there's no need for a war because I made the mistake and I'm paying for it."

The remaining men of the kidnapping party stepped off the sledge into the trampled snow, just here. One said clumsily, "Sorry, Hunt. 'Luck!'"

"What luck could I have?" asked the stocky man, wearily.

The roaring of the sledge's drive, which had been a mere muffled throbbing, rose to a booming bellow. The snow-vehicle surged forward, heading downward into the valley with the dark area below. Half a mile down, it began to sweep in a great circle to return upon its former track. Calhoun twisted in his seat and shouted above the roar. He made violent gestures. The deep-voiced Hunt, driving from a standing position behind the seat, slowed the sledge. It came nearly to a stop and hissing noises from snow passing beneath it could be heard.

"What's the matter?" His tone was lifeless. "What d'you want?"

"Two people have run away," said Calhoun vexedly, "your daughter Nym and a man from Three City, whatever that is. You're driven out to prevent fighting between the cities."

"Yes," said Hunt, without expression.

"Then let's go get the runaways," said Calhoun irritably, "before they die in the snow! After all, you got me to have me save them! And there's no need for anybody to die unless they have to!"

Hunt said without any expression at all, "They're heading for the hotlands, where they'd never get. It's my meaning to take you back to your ship, and then find them and give them the sledge so's they'll—so Nym will keep on living a while longer."

He moved to shift the controls and set the sledge again in motion. His state of mind was familiar enough to Calhoun, shock or despair so great that he could feel no other emotion. He would not react to argument. He could not weigh it. He'd made a despairing conclusion and he was lost to all thought beyond carrying it out. His intention was not simply a violent reaction to a single event, such as an elopement. He intended desperate means by which a complex situation could be kept from becoming a catastrophe to others. Three City had to be dealt with in this fashion, and One City in that, and it was requisite that he die, himself. Not only for his daughter but for his community. He had resolved to go to his death for good and sufficient reasons. To get his attention to anything else, he would have to be shocked into something other than despair.

Calhoun brought his hand out of its pocket. He held the blaster. He'd pocketed the weapon before he went to examine the cow. He'd had the power to stop his own abduction at any instant. But a medical man does not refuse a call for professional service.

Now he pointed the blaster to one side and pressed the stud. A half-acre of snow burst into steam. It bellowed upward and went writhing away in the peculiar blue-gold glow of this world at night.

"I don't want to be taken back to my ship," said Calhoun firmly. "I want to catch those runaways and do whatever's necessary so they won't die at all. The situation here has been thrown into my lap. It's a Med Service obligation to intervene in problems of public health, and there's surely a public health problem here!"

Murgatroyd wriggled vigorously under Calhoun's parka. He'd heard the spitting of the blaster and the roaring of exploded steam. He was disturbed. The stocky man stared.

"What's that?" he demanded blankly. "You pick up . . ."

"We're going to pick up your daughter and the man she's with," Calhoun told him crossly. "Dammit, there's an isolation syndrome from what looks like a Crusoe health problem here! It's got to be dealt with! As a matter of public health!"

The stocky Hunt stared at him. Calhoun's intentions were unimaginable to him. He floundered among incredible ideas.

"We medics," said Calhoun, "made it necessary for men to invent interplanetary travel because we kept people from dying and the population on old Earth got too large. Then we made interstellar travel necessary because we continued to keep people from dying and one solar system wasn't big enough. We're responsible for nine-tenths of civilization as it exists today, because we produced the conditions that make civilization necessary! And since on this planet civilization is going downhill and people are dying without necessity, I have the plain obligation to stop it! So let's go pick up your daughter Nym and this sweetheart of hers, and keep them from dying and get civilization on the up-grade again!"

The former leader of the kidnappers said hoarsely:

"You mean . . ." Then he stammered, "Th-th-they're heading for the hotlands. No other way to go. Watch for their tracks!"

The drive-engine bellowed. The sledge raced ahead. And now it did not complete the circle that had been begun, to head back to the landing-grid. Now it straightened and rushed in a splendid roaring fierceness down between the sides of the valley. It left behind the dark patch with its whirling mists. It flung aside bow-waves of fine snow, which made rainbows in the half-light which was darkness here. It rushed and rushed and rushed, leaving behind a depression which was a singular permanent proof of its passage.

Calhoun cringed a little against the wind. He could see little or nothing of what was ahead. The sprayed wings of upflung snow prevented it. Hunt, standing erect, could do better. Murgatroyd, inside the parka, again wriggled his nose out into the stinging wind and withdrew it precipitantly.

Hunt drove as if confident of where to go. Calhoun dourly began to fit things into the standard pattern of how such things went. There were evidently three cities or colonies on this planet. They'd been named and he'd seen

three patches of pasture from the stratosphere. One was plainly warmed by power applied underground, electric power from the landing-grid's output. The one now falling behind was less likely to be electrically heated. Steam seemed more probable because of the vapor-veil above it. This sledge was surely fuel-powered. At a guess, a ram-jet drove it. Such motors were simple enough to make, once the principle of air inflow at low speeds was known. Two City—somewhere to the rear—might operate on a fuel technology which could be based on fossil oil or gas. The power source for Three City could not now be guessed.

Calhoun scowled as he tried to fill in the picture. His factual data was still limited. There was the misty golden ribbon in space. It was assuredly beyond the technical capacity of cities suffering from an isolation syndrome. He'd guessed at underground hydroponic gardens. There was surely no surface city near the landing-grid and the city entrance they'd just left was in the face of a cliff. Such items pointed to a limited technical capacity. Both, also, suggested mining as the original purpose of the human colony or colonies here.

Only mining would make a colony self-supporting in an arctic climate. This world could have been colonized to secure rare metals from it. There could be a pipeline from an oil field or from a gas well field near a landing-grid. Local technological use of gas or oil to process ores might produce ingots of rare metal worth interstellar freight charges. One could even guess that metal reduced by heat-chemistry could be transported in oil suspension over terrain and under conditions when other forms of surface transportation were impractical.

If the colony began as a unit of that sort, it would require only very occasional visits of spacecraft to carry away its products. It could be a company-planet, colonized and maintained by a single interstellar corporation. It could have been established a hundred and fifty or two hundred years before, when the interstellar service organizations were in their infancy and only operated where they were asked to serve. Such a colony might not even be on record in the Medical Service files.

That would account for everything. When for some reason the mines became unprofitable, this colony would not be maintained. The people who wished to leave would be taken off, of course. However, some would elect to stay be-

hind in the warmed, familiar cities they and their fathers had been born in. They couldn't imagine moving to a strange and unfamiliar world.

So much was normal reasoning. Now the strictly technical logic of the Med Service took over to explain the current state of things. In one century or less an isolated community could lose, absolutely, its defenses against diseases to which it was never exposed. Amerinds were without defense against smallpox, back on Earth. A brown race scattered among thousands of tiny islands was nearly wiped out by measles when it was introduced. Any contact between a long-isolated community and another—perhaps itself long isolated—would bring out violently any kind of contagion that might exist in either.

There was the mechanism of carriers. The real frequency of disease-carriers in the human race had been established less than two generations ago. But a very small, isolated population could easily contain a carrier or carriers of some infection. They could spread it so freely that every member of their group acquired immunity during infancy. A different isolated group might contain a carrier of a different infection and be immune to it but distributive of a second disease.

It was literally true that each of the three cities might have developed in their first century of isolation a separate immunity to one disease and a separate defenselessness against all others. A member of one community might be actually deadly to a member of either of the others whom he met face to face.

With icy wind blowing upon him as the sled rushed on, Calhoun wryly realized that all this was wholly familiar. It was taught, nowadays, that something of the sort had caused the ancient, primitive human belief that women were perilous to men and that a man must exercise great precaution to avoid evil *mana* emanating from his prospective bride. When wives were acquired by capture and all human communities were small and fiercely self-isolated—why each unsanitary tribal group might easily acquire a condition like that Calhoun now assumed in cities One, Two, and Three. The primitive suspicion of woman would have its basis in reality if the women of one tribe possessed immunity to some deadly microbe their skin or garments harbored, and if their successful abductors had no defense against it.

The speeding sledge swerved. It leaned inward against the turn. It swerved again, throwing monstrous sheets of snow aloft. Then the drive-jet lessened its roar. The shimmering bow-waves ceased. The sledge slowed to a mere headlong glide.

"Their trail" Hunt cried in Calhoun's ear.

Calhoun saw depressions in the snow. There were two sets of pear-shaped dents in the otherwise virgin surface. Two human beings, wearing oblong frames on their feet, crisscrossed with cordage to support them atop the snow, had trudged ahead, here, through the gold-blue night.

Calhoun knew exactly what had happened. He could make the modifications the local situation imposed upon a standard pattern, and reconstitute a complete experience leading up to now.

A girl in heavy, clumsy garments had mounted guard in a Two City sentry post above a snow filled mountain valley. There were long and bitter cold hours of watching, in which nothing whatever happened. Eternal snows seemed eternally the same, and there was little in life but monotony. She'd known that across the valley there was another lonely watcher from an alien city, the touch of whose hand or even whose breath would mean sickness and death. She'd have mused upon the strangeness that protected her in this loneliness, because her touch or her breath would be contagion to him, too. She'd have begun by feeling a vague dread of the other sentry. But presently, perhaps, there came a furtive call on the talkie frequency used by sentries for communication with their own cities.

Very probably she did not answer at first, but she might listen. She would hear a young man's voice, filled with curiosity about the sentry who watched as he did.

There'd come a day when she'd answer shyly. There would be relief and a certain fascination in talking to someone so much like herself but so alien and so deadly! Of course, there could be no harm in talking to someone who would flee from actual face-to-face contact as desperately as herself. They might come to joke about their mutual dangerousness. They might find it amusing that cities which dared not meet should hate. Then there'd come a vast curiosity to see each other. They'd discuss that frankly, because what possible evil could come of two persons who were deadly to each other should they actually approach?

Then there'd come a time when they looked at each other

breathlessly in vision-screens they'd secretly stolen from their separate cities' stores. There could be no harm. They were only curious! But she would see someone at once infinitely strange, utterly dear, and he would see someone lovely beyond the girls of his own city. Then they would regret the alienness which made them perilous to each other. Then they would resent it fiercely. They'd end by denying it.

So across the wide valley of eternal snow there would travel whispers of desperate rebellion, and then firmly resolute murmurings, and then what seemed the most obvious of truths, that it would be much more satisfactory to die together than to live apart. Insane plannings would follow, arrangements by which two trembling young folk would meet secretly and flee. Toward the hotlands, to be sure, but without any other belief than that the days before death, while they were together, would be more precious than the lifetimes they would give up to secure them.

Calhoun could see all this very clearly, and he assured himself that he regarded it with ironic detachment. He asserted in his own mind that it was merely the manifestation of that blind impulse to exogamy which makes spacemen romantic to girls in far spaceports. But it was something more. It was also that strange and unreasonable and solely human trait which causes one to rejoice selflessly that someone else exists, so that human life and happiness is put into its place of proper insignificance in the cosmos. It might begin in instinct, but it becomes an achievement only humans can encompass.

Hunt knew it, the stock, deep-voiced despairing figure who looked hungrily for the daughter who had defied him and for whom he was an exile from all food and warmth.

He flung out a mittened hand.

"There!" he cried joyously. "It's them!"

There was a dark speck in the blue-gold night-glow. As the sledge crept close, there were two small figures who stood close together. They defiantly faced the approaching sledge. As its drive-motor stopped and it merely glided on, its runners whispering on the snow, the girl snatched away the cold-mask which all the inhabitants of this planet wore out-of-doors. She raised her face to the man. They kissed.

Then the young man desperately raised a knife. It glittered in the light of the ribbon in the sky—and . . .

Calhoun's blaster made its inadequate rasping noise. The knife-blade turned incandescent for two-thirds of its length.

The young man dropped the suddenly searing handle. The knife sank hissing into the snow.

"It's always thrilling to be dramatic," said Calhoun severely, "but I assure you it's much more satisfying to be sane. The young lady's name is Nym, I believe. I do not know the gentleman. Nym's father and myself have come to put the technical resources of two civilizations at your disposal as a first step toward treatment of the pandemic isolation syndrome on this planet, which with the complications that have developed amounts to a Crusoe health problem."

Murgatroyd tried feverishly to get his head out of Calhoun's parka past his chin. He'd heard a blaster. He sensed excitement. His nose emerged, whiffing frantically. Calhoun pushed it back.

"Tell them, Hunt," he said irritably. "Tell them what we're here for and what you've done already!"

The girl's father told her unsteadily—almost humbly, for some reason—that the jet-sledge had come to take her and her sweetheart to the hotlands where at least they would not die of cold. Calhoun added that he believed there would even be food there, because of the ribbon in the sky.

Trembling and abashed, the fugitives got on the sledge. Its motor roared. It surged toward the hotlands under the golden glow of that ribbon, which had no rational explanation.

IV

"An action is normally the result of a thought. Since we cannot retract an action, we tend to feel that we cannot retract the thought which produced it. In effect, we cling desperately to our mistakes. In order to change our views we have commonly to be forced to act upon new thoughts, so urgent and so necessary that without disowning our former, mistaken ideas, we can abandon them tactfully without saying anything to anybody, even ourselves."

The Practice of Thinking. Fitzgerald.

MURGATROYD came down a tree with his cheek-pouches bulged with nuts. Calhoun inserted a finger, and Murga-

troyd readily permitted him to remove and examine the results of his scramble aloft. Calhoun grunted. Murgatroyd did have other and more useful abilities in the service of public health, but right here and now his delicate digestion was extremely convenient. His stomach worked so much like a human's that anything Murgatroyd ate was safe for Calhoun to an incredible degree of probability, and Murgatroyd ate nothing that disagreed with him.

"Instead of 'physician, heal thyself,' " Calhoun observed, "it's amounted to 'physician, feed thyself' since we got past the frost-line, Murgatroyd. I am gratified."

"*Cheel*" said Murgatroyd complacently.

"I expected," said Calhoun, "only to benefit by the charm of your society in what I thought would be a routine check-trip to Merida Two. Instead, some unknown fumble-finger punched a wrong button and we wound up here—not exactly here, but near enough. I brought you from the Med Ship because there was nobody to stay around and feed you, and now you feed us, at least by pointing out edible things we might otherwise miss."

"*Cheel*" said Murgatroyd. He strutted.

"I wish," protested Calhoun, annoyed, "that you wouldn't imitate that Pat character from Three City! As a brand-new husband he's entitled to strut a little, but I object to your imitating him! You haven't anybody acting like Nym, gazing at you raptly as if you'd invented not only marriage but romance itself, and all the other desirable things back to night and morning!"

Murgatroyd said, "*Cheel*?" and turned to face away from Calhoun.

The two of them, just then, stood on a leaf-covered patch of ground which slanted down to the singularly smooth and reflective water of a tiny bay. Behind and above them reared gigantic mountains. There was snow in blinding-white sheets overhead, but the snowline itself was safely three thousand feet above them. Beyond the bay was a wide estuary, with more mountains behind it, with more snow-fields on their flanks. A series of leaping cascades jumped downward from somewhere aloft where a glacier-foot melted in the sun's heat. Everywhere that snow was not, green stuff shone in the sunlight.

Nym's father, Hunt, came hurriedly toward the pair. He'd abandoned the thick felt cloak and heavy boots of Two City. Now he was dressed nearly like a civilized man,

but he carried a sharpened stick in one hand and in the other a string of authentic fish. He wore an expression of astonishment. It was becoming habitual.

"Murgatroyd," said Calhoun casually, "has found another kind of edible nut. Terrestrial, too, like half the living things we've seen. Only the stuff crowding the glaciers seems to be native. The rest originated on Earth and was brought here, some time or another."

Hunt nodded. He seemed to find some difficulty in speaking.

"I've been talking to Pat," he said at last.

"The son-in-law," observed Calhoun, "who has to thank you not only for your daughter and his life, but for your public career in Two City which qualified you to perform a marriage ceremony. I hope he was respectful."

Hunt made an impatient gesture.

"He says," he protested, "that you haven't done anything either to Nym or to him to keep them from dying."

Calhoun nodded.

"That's true."

"But—they should die! Nym should die of the Three City sickness! Three City people have always said that we had a sickness too, that did not harm us, but they died off!"

"Which," agreed Calhoun, "is undoubtedly historical fact. However, *tempus fugit*. Its current value is that of one factor in an isolation syndrome and consequently a complicating factor in the Crusoe health problem here. I've let Nym and Pat go untreated to prove it. I think there's only a sort of mass hypochondria based on strictly accurate tradition, which would be normal."

Hunt shook his head.

"I don't understand," he protested helplessly.

"Some day I'll draw a diagram," Calhoun told him. "It is complicated. Did you check with Pat on what Three City knows about the ribbon in the sky? I suspect it accounts for the terrestrial plants and animals here, indirectly. There wouldn't be an accidental planting of edible nuts and fish and squirrels and pigeons and rabbits and bumblebees! I suspect there was a mistake somewhere. What does Pat say?"

Hunt shrugged his shoulders.

"When I talk to him," added Calhoun, "he doesn't pay attention. He simply gazes at Nym and beams. The man's mad! But you're his father-in-law. He has to be polite to you!"

Hunt sat down abruptly. He rested his spear against a tree and looked over his string of fish. He wasn't used to the abundance of foodstuffs here, and the temperature—Calhoun estimated it at fifty degrees—seemed to him incredibly balmy. Now he thoughtfully separated one fish from the rest and with a certain new skill began to slice away two neatly boneless fillets. Calhoun had showed him the trick the day after a lesson in fish-spearing, which was two days after their arrival.

"Children in Three City," growled Hunt, "are taught the same as in Two City. Men came to this planet to work the mines. There was a Company which sent them, and every so often it sent ships to take what the mines yielded, and to bring things the people wanted. Men lived well and happily. The Company hung the ribbon in the sky so the hotlands could grow food for the men. But presently the mines could not deliver what they made to the ships when they came. The hotlands grew bigger, the glaciers flowed faster, and the pipes between the cities were broken and could not be kept repaired. So the Company said that since the mine-produce could no longer be had, it could not send the ships. Those who wanted to move to other worlds would be carried there. Some men went, with their wives and children. However, the grandfathers of our fathers' grandfathers were contented here. They had homes and heat and food. They would not go."

Hunt regarded the pinkish brook trout fillet he'd just separated. He bit off a mouthful and chewed, thoughtfully.

"That really tastes better cooked," said Calhoun mildly.

"But it is good this way also," said Hunt. He was grizzled and stocky and somehow possessed dignity which was not to be lost merely by eating raw fish. He waved the remainder of the fillet. "Then the ships ceased to come. Then sickness came. One City had a sickness it gave to people of Two and Three when they visited it. Two City had a sickness it gave to One and Three. Three City . . ." He grunted. "Our children in Two say only Two City people have no sickness. Three City children are taught that only Three City is clean of sickness."

Calhoun said nothing. Murgatroyd tried to gnaw open one of the nuts he'd brought down from the tree. Calhoun took it and another and struck them together. Both cracked. He gave them to Murgatroyd, who ate them with great satisfaction.

Hunt looked up suddenly.

"Pat did not give a Three City sickness to Nym," he observed, "so our thinking was wrong. And Nym has not given a Two City sickness to him. His thinking was wrong."

Calhoun said meditatively, "It's tricky. But sickness can be kept by a carrier, just as you people have believed of other cities. A carrier has a sickness but does not know it. People around the carrier have the sickness on their bodies or their clothing from the carrier. They distribute it. Soon everybody in the city where there is a carrier—" Calhoun had a moment's qualm because he used the word "city." To Hunt the idea conveyed was a bare few hundred people. "Soon everybody is used to the sickness. They are immune. They cannot know it. Somebody from another city can come, and they are not used to the sickness, and they become ill and die."

Hunt considered shrewdly.

"Because the sickness is on clothing? From the carrier?"

Calhoun nodded.

"Different carriers have different sicknesses. So one carrier in One City might have one disease, and all the people in One City became used to it while they were babies, became immune. There could be another carrier with another sickness in Two City. A third in Three City. In each city they were used to their own sickness."

"That is it," said Hunt, nodding. "But why is Pat not dying or Nym? Why do you do nothing to keep them alive?"

"Suppose," said Calhoun, "the carrier of a sickness dies. What happens?"

Hunt bit again, and chewed. Suddenly, he choked. He sputtered, "There is no sickness to spread on the clothing! The people no longer have it to give to strangers who are not used to it! The babies do not get used to it while they are little! There is no longer a One City sickness or a Two City sickness or a Three!"

"There is," said Calhoun, "only a profound belief in them. You had it. Everybody else still has it. The cities are isolated and put out sentries because they believe in what used to be true. People like Nym and Pat run away in the snow and die of it. There is much death because of it. You would have died of it."

Hunt chewed and swallowed. Then he grinned.

"Now what?" His deep voice was quaintly respectful to

Calhoun, so much younger than himself. "I like this! We were not fools to believe, because it was true. But we are fools if we still believe, because it is not true any more. How do we make people understand, Calhoun? You tell me. I can handle people when they are not afraid. I can make them do what I think wise—when they are not afraid. But when they fear . . ."

"When they fear," said Calhoun dryly, "they want a stranger to tell them what to do. You came for me, remember? You are a stranger to One City and Three City. Pat is a stranger to Two City. If the cities become really afraid . . ."

Hunt grunted. He watched Calhoun intently, and Calhoun was peculiarly reminded of the elected president of a highly cultured planet, who had exactly that completely intent way of looking at one.

"Go on!" said Hunt. "How do we frighten them into—this?"

He waved his hand about. Calhoun, his tone very dry indeed, told him. Words would not be enough. Threats would not be enough. Promises would not be enough. Even rabbits and pigeons and squirrels and fish—fish that were frozen like other human food—and piles of edible nuts, would not be enough, by themselves, but . . .

"An isolation syndrome is a neurotic condition, and a Crusoe problem amounts to neurotic hypochondria. You can do it, you and Pat."

Hunt grimaced.

"I hate the cold, now. But I will do it. After all, if I am to have grandchildren there should be other children for them to play with! We will take you back to your ship?"

"You will," said Calhoun. "By the way, what is the name of this planet, anyhow?"

Hunt told him.

Calhoun slipped across the pasture inside the landing-grid and examined the ship from the outside. There had been batterings, but the door had not been opened. In the light of the ribbon in the sky he could see, too, that the ground was trampled down but only at a respectful distance. One City was disturbed about the Med Ship, but it did not know what to do. So long as nothing happened from it. . . .

He was working the combination lock door when some-

thing hopped, low-down and near him. He jumped, and Murgatroyd said, "*Cheer?*" Then Calhoun realized what had startled him. He finished the unlocking of the port. He went in and closed the port behind him. The air inside seemed curiously dead, after so long a time outside. He flipped on the outside microphones and heard tiny patterings. He heard mildly resentful cooings. He grinned.

When morning came, the people of One City would find their pasture-land inhabited by small snowshoe rabbits and small and bush-tailed squirrels and fluttering pigeons. They would react as Two City and Three City had already done—with panic. The panic would inevitably call up the notion of the most feared thing in their lives. Sickness. The most feared thing is always a rare thing, of course. One cannot fear a frequent thing, because one either dies of it or comes to take it for granted. Fear is always of the rare or nonexistent. One City would be filled with fear of sickness.

Sickness would come. Hunt would call them, presently, on a walkie-talkie communicator. He would express deep concern because—so he'd say—new domestic animals intended for Two City had been dumped on One City pasture land. He'd add that they were highly infective, and One City was already inescapably doomed to an epidemic which would begin with severe headaches, and would continue with cramps and extreme nervous agitation. He would say that Calhoun had left medicines at Two City with which that sickness and all others could be cured, and if the sickness described should appear in One City—why—its victims would be cured if they traveled to Two City.

The sickness would appear. Inevitably. There was no longer sickness in the three communities. Arctic colonies, never visited by people from reservoirs of infection, become magnificently healthy by the operation of purely natural causes, but an isolation syndrome . . .

The people of One City would presently travel, groaning, to Two City. Their suffering would be real. They would dread the breaking of their isolation. But they'd dread sickness—even sickness they only imagined—still more. When they reached Two City they would find themselves tended by Three City members, and they would be appalled and terrified. But mock medication by Hunt and Pat—and Nym for the women—would reassure them. A Crusoe condition requires heroic treatment. This was it.

Calhoun cheerfully checked over the equipment of the

Med Ship. He'd have to take off on emergency rockets. He'd have to be very, very careful in setting a course back to Headquarters to report before starting out again for Merida II. He didn't want to make any mistake. . . . Suddenly, he began to chuckle.

"Murgatroyd," he said amiably, "it's just occurred to me that the mistakes we make, that we struggle so hard to avoid, are part of the scheme of things."

"*Chee?*" said Murgatroyd inquiringly.

"The Company that settled this planet," said Calhoun, grinning, "set up that ribbon out in space as a splendidly conservative investment to save money in freight charges. It was a mistake, because it ruined their mining business and they had to write the whole colony off. They made another mistake by not reporting to Med Service, because now they've abandoned the colony and would have to get a license to reoccupy, which they'd never be granted against the population already here. Somebody made a mistake that brought us here, and One City made a mistake by not accepting us as guests, and Two City made a mistake by sending Nym on sentry duty, and Three City made a mistake. . . ."

Murgatroyd yawned.

"You," said Calhoun severely, "make a mistake in not paying attention!" He strapped himself in. He stabbed an emergency-rocket control-button. The little ship shot heavenward on a pencil-thin stream of fire. Below him, people of One City would come pouring out of underground to learn what had happened, and they'd find the pasture swarming with friendly squirrels and inquisitive rabbits and cooing pigeons. They'd be scared to death. Calhoun laughed. "I'll spend part of the time in overdrive making a report on it. Since an isolation syndrome is mostly psychological, and a Crusoe condition is wholly so, I managed sound medical treatment by purely psychological means! I'll have fun with that!"

It was a mistake. He got back to Headquarters, all right, but when his report was read they made him expand it into a book, with footnotes, an index, and a bibliography.

It was very much of a mistake!

QUARANTINE WORLD

I

THERE WASN'T a thing he could put his finger on, but from the beginning Calhoun didn't feel comfortable about the public health situation on Lanke. There wasn't anything really wrong about it, not anything. Calhoun felt that it was just a little bit too good to be true. He and Murgatroyd the *tormal* had arrived in the little Med Ship *Esclipus Twenty*. They'd been greeted with effusive cordiality. Health Department officials opened everything to Calhoun's examination, with a smoothness and speed that almost looked like the planetary authorities were anxious for him to finish his job and get away from there. The Health Minister practically jumped through hoops to provide all the information he could ask for. The communicable diseases appeared to be well in hand. The average age-at-death rate for the planet was the fraction of a decimal-point low, but it was accounted for by a microscopic rise in the accidental-death reports. Calhoun couldn't find a thing to justify the feeling that a cover-up job was being done. If it was, it was being done perfectly. He was a little bit irritated by his own suspicions.

Still, he went through the routine for three sunny days and evenings. He had some new developments in the art of medicine that Med Service Headquarters wanted to have

spread about. He explained them to attentive listeners. In turn, he listened interestedly to what he was told, and the night before he was to lift off for his return to Headquarters he attended a top-drawer medical society meeting in a high ceilinged lecture hall in the Health Department building.

The Health Minister introduced him in a typical speech in which he expressed the value of modern medical science in strictly businessman terms. He mentioned that absenteeism due to sickness was at the lowest figure ever known in the industries of Lanke, and the fact added not less than so many hundreds of millions of credits to the gross annual product of Lanke. The extension of hormone-balance checkups, with other preventive practices, had reduced the overall incidence of sickness requiring hospitalization to the point where in the past ten years so many thousands of hospital beds had ceased to be required. Which added so many other millions of credits every year to the prosperity of Lanke.

There was another item which nobody thought about, but was perhaps the most valuable of all the achievements of medical science. He referred to the fact that epidemics were now substantially impossible. It was not necessary to calculate what an actual epidemic might cost. One could think simply of what the danger might be, to see what medical science added to the planetary wealth. In interstellar trade alone, the simple threat of a dangerous plague on Lanke would mean the quarantining of the planet, and that would mean a financial panic, the closing of factories whose products could not be sold, widespread unemployment, appalling drops in the values of securities, and it could mean runs on banks, the abandonment of construction projects and even curtailment of agricultural production! The wealth that modern medical science contributed to the economy was the true great achievement of the medical profession! Much of this achievement was due to Lanke physicians alone, but the Interstellar Medical Service had made its contributions too, and he was happy to present to them Doctor Calhoun of that Service, whom many of them had met and talked to in the past few days.

Calhoun's speech, of course, was anticlimactic. He said the norm thing for such occasions. It amounted to polite congratulations to the doctors of Lanke for doing what doctors were supposed to do. He did feel, definitely, that

something was being hidden from him, but he hadn't the evidence to justify him in saying so. So he made a speech in no wise remarkable and sat down to wait for the end of the meeting.

He'd much rather have been aboard the Med Ship. Murgatroyd was much better company than the Health Minister beside him. Murgatroyd didn't think of every possible human activity in terms of the money it made or saved. Murgatroyd had enjoyed his stay on Lanke. Calhoun hadn't.

Murgatroyd didn't have to pretend interest while people made dull speeches. Murgatroyd was a small, furry, cordial animal who liked humans and was liked by them. Aground, in human society, he made friends and charmed people and managed to get much petting and quantities of the sweet cakes and coffee he adored. Murgatroyd had fun. There'd been no call for use of the special talent that only *tormals* in all the galaxy possess, and he'd had a happy time. Calhoun looked forward to the restfulness of being back in the Med Ship with him, unbothered by the conviction that something was being put over that he couldn't put a finger on.

Then, suddenly, there were shoutings in another part of the building. A blaster rasped savagely. More shouts, more blasters went off in a storm of fire. Then there was dead silence.

In the lecture hall there was absolute stillness, as startled men listened for more of those decidedly unusual sounds.

They didn't come, but a man in police uniform did enter the back of the hall. He wore a look of most unofficial terror on his face. He spoke to the first doctor he came to inside that door. The doctor's face went gray. He went unsteadily out. Someone asked a question of the policeman. He answered and went out also, as if reluctantly. Others at the meeting moved to ask what had happened and what the policeman said.

The news—whatever it was—went about the hall with extraordinary dispatch. As each man heard, he paled. Some seemed near to fainting. There began, immediately, a universal attempt to leave the lecture hall without attracting attention.

"Dear me!" said the Health Minister, sitting on the speakers' platform beside Calhoun. "What can be the matter? Wait here and I'll find out."

He moved away. He stopped someone and asked a ques-

tion. He was startled. He asked more questions. He came back to Calhoun in something like panic.

"What was it?" asked Calhoun.

"A—a burglar," said the Health Minister. His teeth seemed to be trying to chatter. "Just a burglar. There've been—robberies. We try to keep down crime, you know. It's an economic waste—terrible! But this man was trying to commit a burglary in—this building. He was discovered and he—jumped or fell from a window." The Health Minister wiped beads of sweat from his forehead. "He's dead. A—a shocking thing, of course. But not important. Not important at all. Not worth mentioning. . . ."

Calhoun didn't believe him. The Health Minister was scared. There was no danger here! He was afraid of something a politician might be afraid of. It was that sort of terror. It wasn't too likely, but it might be linked to whatever had been covered up so Calhoun wouldn't discover it. The policeman who'd come in had been frightened too. Why? Then Calhoun looked at the medical-society members in the lecture hall. The meeting had been ended by whatever word passed from man to man. The members of the society were leaving. They tried to be dignified, but also they tried to hurry. There was something puzzling wrong, and the Health Minister had lied about it. Obviously, more questions would only produce more lies. So Calhoun shrugged.

"Anyhow," he observed, "the meeting's over. It's breaking up. I'll get back to the spaceport."

His actual intentions were somewhat different.

"Yes. Yes. Of course," said the Health Minister, shivering. He didn't seem to think of escorting Calhoun out.

Calhoun joined those leaving the hall and the building. They crowded down the stairs, not waiting for a slower lift. Very many of them looked white and sick. Calhoun reached the outer air. Only yards from the exit there was a half-circle of burning flares, stuck in the ground. They bathed the ground and the side of the Health Department building with a pitiless glare.

There was a dead man on the ground. He'd obviously fallen from a height. None of the eminent physicians streaming out of the building so much as glanced at him. They hastened away in the darkness. Only Calhoun approached the flares. A policeman on watch—badly frightened—warned him back. Calhoun considered coldly. Then he stepped into the light past the protesting officer.

The dead man's mouth was open in a gruesome fashion. While the policeman continued to protest, Calhoun made a brisk, superficial examination. The dead man had lost teeth by dental caries, which was remarkable. He had other cavities filled with metal, a process abandoned for centuries. His garments were not made of normal materials, but of some fiber Calhoun did not recognize. There was a scar on his cheek. Calhoun, bending over, saw that tissues on either side of his nose were swollen and pigmented. The appearance was abnormal.

He picked up a bit of cloth, torn in the dead man's fall down the side of the building. As he examined it, a voice gasped, "Calhoun! What are you doing?" It was the Health Minister, leaving the building of his cabinet department. He trembled uncontrollably. "Stop it! Drop it!"

"I was looking at this man," said Calhoun. "It's queer. . . ."

"Come away!" cried the Health Minister hysterically. "You don't know what you're—do . . ." He stopped. He mopped his face, shaking. Then he said, desperately attempting a normal tone, "I'm sorry. It would be a good idea for you to get back to your ship. This man was a criminal. There may be others of his confederates about. The police are going to make a thorough search. We—we civilians should get out of the way."

"But I'd like to look him over!" protested Calhoun. "There's scar tissue on his face! See it? Since when have doctors allowed scar tissue to form in healing wounds? He's lost some teeth and there's a cavity in one of his incisors! How often have you seen dental caries? They simply don't happen any more!"

The Health Minister swallowed audibly.

"Yes. Yes . . . now that you point it out, I see what you mean. We'll have to do an autopsy. Yes. We'll do an autopsy in the morning. But right now, to cooperate with the police—"

Calhoun looked again at the limp, crumpled figure on the ground. Then he turned away. The last of the medical society members came out of the building. They melted away into the night. Calhoun could almost smell panic in the air.

The Health Minister vanished. Calhoun hailed a skimmer-cab and got into it. On the way to the spaceport he considered darkly. He'd evidently seen something he wasn't supposed to see. It might well be connected with what he hadn't been able to put a finger on. He'd told the Health

Minister that he was going back to the spaceport, but that hadn't been his intention then. He'd meant to find a tavern and buy drinks for its habitués until somebody's tongue got loosened. News of a man killed by the police would set tongues wagging in certain kinds of society on any planet.

However, he'd changed his intention. He had a scrap of cloth in his pocket from the dead man's clothing. There was a bit of blood on it. It was extraordinary. The dead man was extraordinary. He'd frightened everybody who seemed to know something Calhoun was not supposed to discover. Considering all he did know, he planned to find out a few things more from that cloth sample.

The skimmer-cab reached the spaceport gate. The guards waved it on. It reached the Med Ship and settled to a stop. Calhoun paid the driver and went into the Med Ship, to be greeted with extravagant enthusiasm by Murgatroyd, who explained with many shrill "*Chee-chees*" that he did not like to be left alone when Calhoun went elsewhere. Calhoun said, "Hold it, Murgatroyd! Don't touch me!"

He put the sample of cloth with its few specks of blood into a sterile bottle. He snapped the elastic cover in place. Murgatroyd said, "*Chee?*"

"I've just seen a pack of thoroughly scared men," said Calhoun dryly, "and I've got to see if they were right to be scared."

He washed his hands with some care, and then extended his precautions—he felt absurd about it—to an entire change of clothing. The terror of the dead man puzzled and bothered him.

"*Chee-chee-chee!*" said Murgatroyd reproachfully.

"I know!" said Calhoun. "You want coffee. I'll make it. But I'm worried!"

Murgatroyd frisked. It was Calhoun's habit to talk to him as if he were a human being. He'd mentioned coffee, and Murgatroyd could recognize that word. He waited for the drink to be made and served. Frowning, Calhoun made it, thinking hard the while. Presently, he passed over the little cup that fitted Murgatroyd's tiny paws.

"There you are. Now listen!" Calhoun spoke vexedly. "I've felt all along that there was something wrong here, and tonight something happened. It could be told in a dozen words. It was, but not to me. A man died and it terrified two policemen, an entire medical society and the Health Minister of the planet. It wasn't the death of a man which

did all this. It was something his death or his presence meant. But I wasn't told. I was lied to. Lied to! What did they want me to keep on not knowing?"

Murgatroyd sipped at his cup. He said profoundly, "*Chee?*"

"I suspect the same thing," said Calhoun, again with vexation. "Generally speaking, facts are hidden only from people whose job it would be to act on them. Facts have been hidden from me. What sort of facts is it my job to act on, Murgatroyd?"

Murgatroyd seemed to consider. He sipped again, reflectively. Then he said with decision, "*Chee-chee!*"

"I'm very much afraid you're right," Calhoun told him. "The local medical profession has repressed it. . . . The Health Minister has a very vivid picture in his mind of what could happen to the economy and the prosperity of Lanke if even the suspicion of an epidemic went about. In short, Murgatroyd, it looks like a thing has been covered up so carefully that it shows. When as much terror as I saw just tonight is felt by everybody—I'd better get to work!"

He put part of the cloth sample—including the small bloodstains—in a culture medium. A fiber or two, though, he examined under a microscope. He shook his head.

"Odd! It's a natural fiber, Murgatroyd! It wasn't made. It grew! They certainly don't grow fibers on Lankel! This man isn't a native son of this planet! Quaint, eh?"

It was quaint. Synthetic fibers were better than natural ones. Nobody used natural fibers any more. Nobody!

He waited impatiently on the culture from the cloth. While it was still too early to expect any specific results, his impatience got the best of him. He filled a vivo-slide for the culture-microscope which would let him watch the behavior of living microorganisms as they grew. He was startled, when he looked at the microscope-screen. There were perfectly commonplace microbes in the culture-broth even so early. However, there was one variety that was astonishing. A curious, dancing, spherical, pigmented organism leaped and darted madly. It visibly multiplied at a prodigious rate. When Calhoun added the Daffos reagent to the contents of the slide, certain highly specific color-effects appeared. The Daffos pathogenicity test was not infallible, but it wasn't meaningless, either. It said that the dancing, spherical microbes should be highly toxic. They produced a toxin the reagent reacted to. The rate of reproduction

was astounding. It should, then, be highly infectious and probably lethal.

Calhoun frowned over the facts. The implications were matters a businessman on Lanke would want hidden, suppressed. A businessman would lie about them, desperately, until the last possible instant. A businessman's government might very well demand of the medical profession that it take precautions without causing undue alarm, and . . . Calhoun knew why the medical men at the meeting looked scared and sick. From the clothing and the blood of a dead man Calhoun had extracted a microbe which was probably that of a deadly plague—so said the Daffos reagents—of enormous infectivity which the clothing, teeth, and scar tissue suggested had come from some other world. This was enough to worry anybody. On Lanke, any physician who caused the danger to be realized, the facts to be known, and a planetary quarantine slapped on Lanke, such a physician would instantly be discredited and subjected to merciless hostility by his government. He'd be ruined professionally, financially and socially, and his family would share in his disgrace and ruin. The terror of the doctors had reason. Until the dead man was found, they'd had no reason for unease. When he was found, they knew instantly what the culture-microscope had just told Calhoun. The doctors of Lanke were in a very bad fix. The government would not—would definitely not—permit a planetary quarantine if they could help it. It would not be anything but the automatic assumption that a financial panic and an industrial collapse must be avoided, whatever else had to be allowed. It would be very bad!

Calhoun began to see this with a bitter clarity. A curious flicker of light behind him made him turn. The outside-field detector-light was glowing on the control-board. Normally it lighted only to report that the force fields of a landing-grid touched the Med Ship when the ship was to be brought to ground, or else when it was to be lifted off to a distance at which a Lawlor drive could be used. There was no reason for it to come on now!

Then the G.C.—general communication—speaker said:
"Calling Med Ship Esclipus Twenty! Calling Med Ship Esclipus Twenty! Spaceport control office calling Med Ship Esclipus Twenty!"

Calhoun threw the answer switch.

"*Esclipus Twenty* here," he said shortly. "What's the matter?"

"*Checking, sir,*" said the voice detachedly. "*Are you sealed up?*"

Calhoun glanced at the air-lock. Aground, of course, it could be opened like the two sets of doors of a vestibule, with direct communication between the inside of the ship and the outside air. However, without thinking particularly about it, Calhoun had left the Med ship with its own air-renewal system operating.

"Yes," said Calhoun. "I'm sealed up. Why?"

"*Message for you, sir,*" said the voice.

There was immediately the voice of the Health Minister, racked and upset, coming out of the speaker.

"*You are requested to leave Lanke at once,*" it said agitatedly. "*Complaint will be made to the Med Service that you attempted to interfere with police measures against crime. Your ship will be lifted off as of now, and you are forbidden to return.*"

Calhoun said angrily, "The devil you say! I declare a quarantine—"

The communicator clicked. The Health Minister had cut off. The detached control-office voice said woodenly, "*I'm lifting you off, sir, as ordered. Lift-off coming. . . .*"

Calhoun's mouth opened, to swear. Instantly he saw very many more things it had not been the intention of the Health Minister to tell him. He clenched his hands. This wasn't good!

Then the Med Ship stirred, and instantly thereafter seemed to fall toward the sky. Calhoun angrily flipped on the outside vision-plates and his sensations and the statements of the control-office voice agreed. The Med Ship was being lifted off. Below it, the lights of the spaceport receded. Then the street lights of Lanke's capital city were coming into view from behind tall buildings. They winked into sight from farther toward the dark horizon. The small spaceship went up and up.

The smaller, fainter lights of another city appeared. A little while later, the lights of still another. The capital city's pattern of streets grew ever smaller. More other city-glows appeared and seemed at once to dwindle and to drift toward and under the rising Med Ship. There was nothing to be seen anywhere except those minute, diminishing speckles of light.

Presently, the ship went into cloud-cover and for seconds the vision-screens were blank. Then it reached clear air again and then there was nothing but the starlit cloud-cover below, and ten thousand million stars above.

The Med Ship was being lifted by the spaceport's landing-grid. Eventually, the stars crept downward, and seemed to draw together, and the world of Lanke became only a diminishing circular patch of darkness against the galaxy's all-surrounding suns. Then the communicator-speaker spoke woodenly again.

"Calling Med Ship Esclipus Twenty! Calling Esclip . . ."

"Esclipus here," said Calhoun coldly.

"You are now five diameters out," said the unemotional voice, *"And I am about to release you. Check?"*

"Check," said Calhoun sardonically.

He flipped off the G.C. transmitter. He felt the new freedom of the Med Ship. He spoke in an even more sardonic tone to Murgatroyd. "This is a first, Murgatroyd! It's the first time a Med Ship man has ever been thrown off a planet because he found out too much!" Then he added with a definite grimness, "It happens that throwing us off the planet verifies what I was only partly guessing and requires what I was hesitating to do."

His tone disturbed Murgatroyd, who of course could not understand what had happened. But he was upset because Calhoun was. Murgatroyd said shrilly, *"Chee-chee!"*

"We're going back to Headquarters," said Calhoun sourly. "We can take our news there quicker than we can send it. Anyhow they'll need more than you and me on Lanke to handle a plague—especially if it's a bad one. But I don't like it!"

He was angry. But it wasn't unprecedented for planetary governments to try to cover up things that would be bad for business. There'd been attempts before now to conceal outbreaks of disease. Some had probably succeeded. Those that failed turned out very badly indeed. Minor epidemics had become major plagues when a prompt call for Med Service help would have kept them minor and wiped them out. The Med Service had big ships, half a mile long and longer, with laboratories and equipment and personnel that could handle emergencies of planetary size. But very, very many lives had been lost because of governments subordinating everything but business to business. They'd tried to prevent business crises and financial panics and industrial col-

lapse. They'd only delayed them—at incalculable costs in lives.

There was another factor, too. If a planetary government once concealed an emergency of this sort, it would never dare admit it later. A certain world in Cygnus had concealed a serious epidemic in order to protect its interstellar trade. Later the fact was learned by Med Service. It made a check of the public health status of that reckless world, in view of its just-learned medical history. It discovered and announced an imminent second epidemic—a perfectly accurate statement of fact. The first epidemic had not been cleaned up properly by the local physicians. The epidemic was cyclic—with a normal period of high-incidence after every so many years. So the Med Service quarantined that world—justly—and took stringent measures—wisely—and there was consequently no second plague. But there were many hard-boiled businessmen who fumed that the Med Service had no reason for its action; that it had been punishing the Cygnus world for violating a primary rule for galactic public health. The planet had concealed a disease that might but hadn't been passed on to its customers. Businessmen believed the quarantine a penalty.

So Calhoun knew grimly that if there'd been a hidden plague on Lanke in the past, it would never be admitted now. Never! And any doctor who revealed the historical fact . . . The reason for the silence of Lanke's doctors was abundantly clear.

But this situation wasn't as simple as the Cygnus affair. The dead man Calhoun had partly examined wasn't a native of Lanke. Yet the doctors of Lanke knew all about him and the plague of which he was dying when blaster bolts drove him to a quicker death. He didn't belong on Lanke. Worse, he didn't belong anywhere else. His state of civilization wasn't appropriate anywhere in the galaxy. But he was positively a man. Calhoun had seen drama tapes about lost colonies and villages of castaways, and even elaborate hiding places for refugees from the laws of planets. But he didn't believe them.

"Still," he said irritably, "where did he come from?"

He felt that there were too many questions already. But there was something definite to do. Several things. For the first of them he swung the Med Ship about and aimed it at the small, remote star cluster where Sector Headquarters was established. He punched the computer keys. He said:

"Overdrive coming, Murgatroyd! Five . . . four . . . three . . . two . . . one . . ."

There was a sudden intolerable giddiness and an instant's insupportable nausea, and the sensation of a spiral fall to nowhere. Then, abruptly, everything was quite all right. The Med Ship was in overdrive, surrounded by a cocoon of stressed space which changed its own position many times faster than the speed of light, and carried the little Med Ship with it.

Calhoun paced up and down the control room, scowling. The background tape began to make its unobstrusive sounds. In overdrive, of course, the Med Ship was wholly isolated from the normal universe of galaxies and stars. There was, in theory, only one conceivable way in which it could be affected by anything outside its own overdrive field, and that had never happened yet. So there could have been a sepulchral, nerve-racking silence in the small spacecraft but for such sounds as the background tape provided.

They were trivial, those sounds. One had to pay close attention to hear them. There was the sound of rain, and of traffic, and of wind in treetops and voices too faint for the words to be distinguished, and almost inaudible music—and sometimes laughter. The background tape carried no information; only the assurance that there were still worlds with clouds and people and creatures moving about on them.

But sensory assurance of the existence of a real cosmos is as essential to a man's subjective health as hormones and enzymes to his body. Calhoun would have suffered from the lack of such noises if they'd stopped, but he paid no attention to them when they began.

"That man," said Calhoun abruptly, "wasn't a normal inhabitant of Lanke, Murgatroyd! He didn't grow up on it! He carried microscopic flora and fauna with him—as don't we all?—but they were very probably as alien to Lanke as the man himself! The doctors knew about it, and they were afraid. Afraid! But where did he come from?"

Murgatroyd had retreated to his little cubbyhole in the control-room. He was curled up there with his furry tail draped across his nose. He blinked at Calhoun. It is a characteristic of *tormals* that they imitate the actions of humans as parrots imitate human speech. When Calhoun talked conversationally, Murgatroyd adored pretending that he discussed abstruse subjects with him. But now Calhoun

really talked to himself. Murgatroyd realized it. He said, "Cheel" and prepared to take a nap.

Presently, Calhoun began an angry, systematic search through the Med Ship's microfilm library. It was a remarkable storage system for facts. It reduced a page of text to the size of a printed period, and the *Esclipus Twenty* was able to carry more reference material for a Med Service man's needs than most national libraries contained. The data-retrieval system was one of the great technical achievements of the previous century. Calhoun had at his fingertips more information on medical subjects than earlier times could have imagined.

The library had nothing to say about a plague which produced—doubtless among other symptoms—enlarged and stiffened, pigmented tissues on either side of a man's nose. Nor did it have any record of a microorganism exactly matching the one he'd gotten from the cloth of the dead man's garments—or the specks of blood included—and suspected of the water he'd washed in.

The really basic question remained, too. Where had the inexplicable man come from?

Calhoun checked the progress of his cultures. All thrived.

Calhoun set up an imaginary globe in space, with Lanke as its center. He set the data-retrieval unit to find a habitable world, not known to be colonized, in that volume of emptiness. An abortive attempt at colonization might have left some castaways behind. That would raise almost as many questions as it answered, but it seemed the most likely approach to the problem.

There was no habitable world in the Stellar Directory portion of the ship's microfilm records. He tried a larger volume of space. Then a still larger one. Nothing.

He tried for less than a habitability-one world. Individual survival might be possible where a colony could not live. He set the search-unit to work again. It found a world which was airless, a gas-giant world with intolerable gravity, another which had an equatorial temperature of minus sixty degrees at noon. Another . . .

Ultimately, one turned up which looked plausible. It was the third-orbit planet of a Type G sun. It was not unduly remote from Lanke. It was listed under the name Delhi. Shallow, marshy seas. A single continent. Temperature, not unbearable. Life-types not unduly dangerous. Atmosphere typical of third-orbit planets but with .04% of a complex

methane-derivative gas, apparently harmless. This data had been sent up from an exploring spaceboat, later lost. There were what was believed to be the ruins of a human settlement, photographed from space. Classed as habitability zero because no ship had ever returned to its home spaceport after landing on it. The inimical factor was assumed to exist in the atmosphere, but was not known.

Here was material for guesses, but nothing more. It threw no light on where the dead man with bad teeth had come from. Calhoun went over all the other reports. No other was even as promising as this.

He had been seven hours in overdrive when the projected letters of the microfilm material separated into twins. Every letter doubled. The reading-matter became unreadable. With one eye covered, reading was just barely possible, but he could see nothing with real clarity.

He took his temperature. He felt perfectly well, but he had a high fever and his eyes grew progressively worse. He said grimly to Murgatroyd, "I begin to see some excuse for the doctors on Lanke. Whatever they were afraid of getting, I've got! It's highly infectious, all right!"

Ten hours out from Lanke, his vision cleared again. He could fuse the images from both eyes. He continued to feel perfectly well, but his temperature was half a degree higher than three hours earlier.

"This," he told Murgatroyd, "is not according to the rules! I may have to call on you as a member of the medical profession!"

He gave himself as thorough a physical examination as one can give himself. He used the amplifier-microscope on his saliva, his blood, on every body fluid. Each of them showed a minute, perfectly spherical pigmented microorganism in appalling numbers. As he regarded them on the screen of the amplifier-microscope they broke into halves, became small spheres, grew swiftly and prepared to divide again. Meanwhile, they danced and darted and whirled frantically. The reaction to the Daflos reagents indicated the presence of a deadly toxin.

"And I took precautions!" Calhoun said rather dizzily. "I washed and showered. I could almost have operated with no more attempt at a sterile environment!" He shook his head. "I think I can go a little longer. That dead man was farther along than this. I've time enough to call on you, Murgatroyd."

He looked at himself in the mirror. The curious enlargement of the flesh beside his nose had appeared. He began to get out his equipment. Something occurred to him.

"The Health Minister," he said sardonically, "didn't quarantine me. He sent me off. He had no fear of my reporting anything to Headquarters! I should be dead before break-out, and you couldn't run the ship to Headquarters and it would never be found." Then he said, "Let's prevent such an unpleasant fate, Murgatroyd!"

He drew a small sample of blood from his arm. He injected it into Murgatroyd where a small patch of skin on the *tormal's* flank had been desensitized almost as soon as he was born. Murgatroyd made no objection.

It was the remarkable talent of *tormals*—all *tormals*—that they could not be infected by any microorganism. They could not ordinarily contract any ailment at all. Their digestive systems rejected any substance that would impair their health, and they had a dynamic reaction to infective material. When their normal defenses were bypassed and pathogenic material was put into their bloodstream, they produced antibodies at an almost explosive rate, sufficient to rout any known harmful virus or microbe. They were valued by the Med Service because after a *tormal* had produced antibodies, their structure could be determined and they could be synthesized in any desired quantity. So whatever infection a new planet might offer, it could be brought under control.

Now Murgatroyd went back to his cubbyhole, yawning. He crawled in to doze. Calhoun made a mental note to check his pulse and breathing in half an hour. He, himself, felt feverish. His head seemed to rock a little. His eyes went bad again. He saw double. Murgatroyd dozed peacefully. Calhoun doggedly waited for him to react to the microscopic spheres. His heartbeat should go up four or five counts a minute. He might run a degree of fever. He would be sleepy for two hours, or three, or even four. Then he'd wake up and his blood would contain antibodies against the material with which he'd been inoculated. He'd be back in robust health, and able to share it with Calhoun.

It didn't work out that way. When Calhoun went to check his pulse-rate in half an hour, Murgatroyd came wide awake. He said, "*Cheel*" in an inquiring tone. He scrambled out of his nest, filled with vim and zest for whatever the

hour might bring forth. His pulse was normal. His temperature was equally correct.

Calhoun stared at him. Murgatroyd couldn't have looked healthier. He showed no sign of having needed to produce antibodies.

He hadn't. There are some diseases, contagious among animals, to which human beings are immune. There are some from which humans suffer, to which animals are not subject. More than once medical research has been halted while a hunt was made for an experimental animal in which a particular strain of microbes or viruses could live.

The plague of which Lanke was terrified and Calhoun a victim happened to be a plague to which Murgatroyd did not need to form antibodies. He was immune to it by the simple normal chemistry of his body, and there was nothing that Calhoun could do about it. He considered that he would unquestionably die within a certain short number of days or hours. The Med Ship would drive on, to break out somewhere within a light-year more or less of its destination. From there, it should make a shorter overdrive-hop to a matter of no more than a million miles or two, and then it should use Lawlor Drive within the solar system, on whose planet the Interstellar Medical Service had its headquarters.

But if Calhoun was dead nothing of the sort would happen. The Med Ship would break out. Murgatroyd might still be alive, but he could do nothing. Eventually he would die, bewildered. The Med Ship would never, never be found so long as time ran on, and Lanke . . .

"Murgatroyd," said Calhoun, "this is a bad business! And you're right in it! I know what I'm up against, but what am I going to do for you?"

Murgatroyd said confidently, "*Chee-chee-chee!*"

"I'm seeing better," said Calhoun suddenly. "It seems to come in waves of better and worse. Intermittent."

He put his hand to his face to feel the now-marked unresilient stiffened flesh beside his nose. Murgatroyd looked hopefully at the coffee pot. He said, "*Chee?*" There was nothing to indicate the possibility of anything, not anticipated. There was no reason for anything to happen.

Then, abruptly, everything changed. The *Esclipus Twenty* was in overdrive and there was only one thing which even in theory could affect her from outside. It was said that if a ship were in overdrive and all the cosmos exploded, and everything in all the galaxies ceased to be,

including the galaxies themselves, that people in a ship in overdrive would not know of the disaster and would not hear the last trumpet until breakout-time came.

But now, here at this moment, Calhoun felt a familiar and monstrous dizziness, and an equally familiar and intolerable nausea, and then all the sensations of a whirling, spinning fall toward nothingness. Simultaneously the little ship's vision-screens lighted, the *Eclipus Twenty* broke out of overdrive and lay floating in space surrounded by a myriad of stars, and a small but bright red light flashed luridly on the control-board.

II

MURGATROYD made the first comment. It was an indignant, protesting, "*Chee-cheel Chee-cheel*"

He was accustomed to the sensations of going into overdrive and out of it again. He didn't like them. Nobody did. Murgatroyd endured them for the sake of being where Calhoun was, being petted by Calhoun, drinking coffee with Calhoun, and on occasion engaging in long, leisurely discussions to which Murgatroyd contributed his shrill voice and stubborn conviction that he was actually conversing. Now, though, he protested. Before breakout there was normally an hour-off warning, then a five-minute warning, and then a solemn tick-tock-tick-tock until a gong sounded and then a voice counted down to zero. Murgatroyd had learned that this was the routine for breakout; but just now the extremely unpleasant sensations had happened with no warning whatever. It was upsetting. It was a violation of the accepted order of things. He said, "*Chee-cheel Chee-cheel*" even more indignantly.

Calhoun stared at the star-speckled screens. He was entirely incredulous. The red light on the control-board was notice of something solid nearby in space. But that was impossible! The Med Ship was in between-the-stars, light-years from Lanke. In between-the-stars there is nothing more solid than starlight. Solidity in this emptiness would be even more unlikely than a ship breaking out of overdrive strictly on its own decision. However, the limit of improbability

was reached when not only a ship broke out of itself, but the near-object warning flashed simultaneously.

Calhoun stared at the screens. It didn't make sense, unless a highly theoretic happening had occurred. In theory, two overdrive fields might affect each other. Nothing else could. For extremely abstract reasons, it had been determined that *if* two ships passed close to each other, and *if* they were of nearly the same size, and *if* both overdrive-field units were nearly of the same strength, either or both fields could blow out. For this reason a circuit-breaker was included in all overdrive designs. The odds against such a thing were ten plus a handful of zeros to one. It had never before been known to happen. Now it had.

Calhoun slipped into the pilot's chair. He threw switches. Overdrive off. It had gone off by itself. Circuit-checker on. A special instrument verified all contacts and connections. This instrument stuttered for an instant and then flashed the signal, "Go." A circuit-breaker had operated, but it was now reset. It was the one in the overdrive circuit. Calhoun barely noticed that the G.C. speaker had come on also and now relayed the crackling and hissing noises that would be "poets call," the small-talk of the stars. Calhoun found himself gazing unbelievably at the screens.

A second-magnitude star winked out and back to brightness. A less brilliant nearby star followed. Calhoun swung the radar and looked incredulously at what it reported. There was something in between-the-stars no more than four hundred miles away. With hundreds of thousands of cubic light-years of space to move about in, something in overdrive had passed within four hundred miles of the *Esclipus Twenty*. Two circuit-breakers had operated, and—there they were! The radar blip said the other object was a trifle smaller than the Med Ship, and it appeared to be practically motionless, moving only enough to occult two nearby stars within a few seconds.

Murgatroyd said yet again, and even more indignantly, "Cheell Cheell!"

"I didn't do it, Murgatroyd," said Calhoun abstractly. "Quiet for a minute!"

He threw another switch and the electron-telescope came on. He searched with it. He made fine adjustments for focus. Then his face expressed blank unbelief.

The telescope screen showed another ship floating in the starlight. It was not much like any other ship Calhoun had

ever seen. At first it seemed a freak; not alien but eccentric, not of a non-human design, but like something made by men who'd never seen a real spaceship. There was a pipe-like object sticking out of its bow.

He pressed the G.C. call-button; but first he cut off the lens that would transmit a picture of himself. He called.

"General Call!" he snapped, "General Call! Med Ship *Esclipus Twenty* making general call! What ship's that?"

There was no answer. He frowned. Only minutes since he'd discovered himself very definitely condemned to death by an unfamiliar plague-germ. A little earlier he'd been thrown off the planet Lanke for discovering too much. Before that he'd seen a dead man who couldn't come from anywhere. This extremely unusual ship couldn't come from anywhere, either.

He suddenly heard murmuring voices. There seemed to be several persons speaking in low tones near an open microphone. They were in disagreement. One voice raised itself above the others but the words were still indistinct.

"Hello!" said Calhoun sharply. "I hear your voices! Who the devil are you and what's going on?"

It occurred to him as odd that, with a plague on him and the end to all his responsibilities drawing near, he still spoke authoritatively as a Med Service man and a citizen of the galaxy to persons whose actions required to be explained. He repeated sternly, "What's going on?"

The other ship was incredible. It was patched with patches on top of patches. It was preposterous. The electron telescope could not give the finer details in mere starlight, but it was rusty and misshapen and no spaceport would ever lift it off the ground! Yet here it was.

A voice rasped from the G.C. speaker overhead, "*Look! What do you think you're doing?*" As Calhoun blinked, it said pugnaciously, "*What d'you think you're doing to us? You . . . know what I mean!*"

Calhoun said coldly, "This is Med Ship *Esclipus Twenty*. Who are you?"

"*Med Ship?*" snapped the angry voice, "*wha—*"

The voice stopped abruptly, as if a hand had been clapped over someone's mouth. There were more murmurings.

Calhoun grimaced. He didn't understand this other ship. He'd cut off his own vision-lens because he didn't want anybody to see him with the marks of the plague on him. Whoever spoke from the patched-up other spacecraft didn't

want to be seen, either. The murmurings came to an end. The harsh voice snapped, "*Never mind that! What'd you do to us? We were going about our business when—whangol! Something hit us. And we're here instead of where we were going! What'd you do?*"

Calhoun saw a stirring of the radar blip. The other craft was moving toward the Med Ship. Then he felt the edges of everything becoming twinned. His eyes were going bad again. No, he didn't want to mention his own situation. Nothing could be done for him, and dying is a strictly private matter. He felt concern for Murgatroyd, but he was a Med Ship man and there was a certain way he should act. He was impatient. Whoever was piloting the other ship knew nothing about his work. Calhoun felt the indignation of a professional with an inept amateur.

The rasping voice said truculently, "*I'm asking what you did!*"

"We did something to each other," said Calhoun coldly. "We came too close to each other. Our overdrive units got overloaded. Our circuit-breakers cut them off. Do you want more information than that?"

"What other information have you got?" demanded the voice.

Calhoun felt feverish. The symptoms of this plague were evidently intermittent. They came and they went. They'd probably grow more and more severe until he died of them—but . . .

"I take it," he said coldly, "that you don't know what you're doing or why, because you don't know what's happened. Do you know where you are, or how to get to where you want to go? In other words, do you want help?"

"What kind of help?" The question was asked with suspicion.

"First off," said Calhoun, "you broke out of overdrive. Have you checked your circuit-breaker?"

"We don't call it that," said the voice. "*What is it?*"

Calhoun could have sworn. Instead, he closed his eyes. He felt a diminishing of his sense of balance. He was annoyed at the prospective loss of dignity, but he said, "A circuit-breaker . . ." Then with his eyes closed he told what a circuit-breaker was, and where it would be in a power-line. There should be an indicator saying, "Off." There had to

be a circuit-breaker or the other ship would be full of smoke from burned-out insulation.

It occurred to him how the other ship came to be what it was. It was a salvage job. It had been found somewhere and cobbled back to precarious operation by men who had to guess at the functions of what they repaired. They'd lifted off to space with it, probably by rocket. It was hair-raising to think of it!

All he could do was give them advice and possibly a course in drive-time so they wouldn't over-shoot, for now. . . .

"When you find the circuit-breaker, turn off the overdrive switch in the control-board," he said. "Then—not before!—throw the circuit-breaker back on. Then you can go into overdrive again. How about your fuel? This is a repaired spaceboat, isn't it?"

A strained silence, and then a suspicious assent.

Calhoun had them report on the fuel, the air-pressure and the air-renewal apparatus. His sense of balance began to come back. He called for more and more instrument readings.

"You haven't too much fuel," he said briefly, "but you can get to a nearby spaceport. That's all! Where do you want to go?"

"That's our business!"

"You've only so many possible destinations," Calhoun told them. "Wait a minute."

He worked the computer and the data-retrieval device. He got courses from here to the nearest inhabited planets. There were four that they could reach handily. Calhoun named them and the time in overdrive required to get reasonably close to them—to a distance the Lawlor drive could traverse in a practicable interval. . . . One of the four was Lanke, and Calhoun frankly advised against taking the agglomeration of patches that was a ship to Lanke. His reason was the considerable likelihood that there was plague on Lanka now.

"I've written down the courses and drive-times," he observed. "Write them down as I dictate."

He dictated them. Murmurings. Discussion in the background of the other spacecraft. The harsh voice said, *"Those drive-times are pretty long. There's a yellow sun that looks close."*

"It's Delhi," said Calhoun, from memory. "It has an Earth-type planet and there may have been a colony on it once.

But there's nothing there now! There's something wrong with it and no ship is known to have gotten back to its home spaceport after landing on it." He added conscientiously, "It's near enough. The drive-time's only—" He gave the drive-time and the course. "But I advise you to go to one of the other nearby worlds, go into orbit around it, and call down. They'll land you somehow. And when they get you down to ground, stay there!"

His eyes were better. He looked at the screens. The freakish, patched-up boat was very, very close, not more than a score or two of miles away. He opened his mouth to protest indignantly. He was practically a dead man. At the moment, to be sure, he felt only feverish. Otherwise, nothing serious seemed to be wrong. However, he knew that a mirror would show his own self with the plague marks he'd seen on a dead man back on Lanke.

"Meanwhile," he added, "you'd better not come closer to me."

There was no answer. There were, though, murmurings near the microphone in the other ship. Someone protested against something. The rasping voice growled. There was a click, and the murmuring stopped. The other microphone had been cut off.

Calhoun's eyes improved still more. He looked at the electron-telescope image of the other ship. It was turning to face him directly, the pipe at its bow bore exactly.

Suddenly, there was a mad, violent swirling of vapor or gases from the tube at the other ship's bow. Emptiness snatched at it, grasped it, separated it to atoms and threw them away.

The Med Ship was alone. Something minute remained where the preposterous other spacecraft had been. It was very, very small. It was only a moving speck of reflected starlight. Then the electron telescope screen showed it clearly. It was bright metal, it was torpedo-shaped, and it moved with a certain high, fixed velocity toward the *Esclipus Twenty*.

Calhoun stared at it. He knew at once what it was, of course, but his reaction was modified by the situation he found himself in. Normally, he'd have been angered by the sending of a missile, probably charged with chemical explosive, to destroy the Med Ship after the attacking vessel had vanished in overdrive. He was acutely aware that he happened to be in one of the remission-periods of the plague

which undoubtedly would kill him. If he'd thought of the future as one usually does, he'd have been angry that somebody had tried to destroy him. Now he had no future to be robbed of. If this shell shattered the Med Ship, it wouldn't be doing very much. It would deprive him of one—two—maybe three days of vanishing satisfactions, in which he could accomplish nothing whatever.

It didn't seem to matter. He found himself smiling wryly at the thing that came swiftly to destroy him. Suddenly, he changed his mind. He threw the Lawlor-drive switch and the Med Ship moved. When the explosive missile passed through the spot the ship had occupied, and went sturdily on and on to nowhere, he grimaced a little.

"I dodged that on your account," he told Murgatroyd. "But for you, I'd have no reason to bother. I can't live to reach Headquarters, though with warning they could receive me without danger and soothe my final hours. I can't land on a nearer, colonized planet without introducing a plague and being a murderer. So I'll compromise and put you down where you just barely may have a sporting chance of surviving—where if you die, it won't be by starving in this ship. I'll do whatever futile things my condition permits."

He began to set up a course and drive-time on the ship's automatic pilot. A little later he said, "Overdrive coming, Murgatroyd!"

Then came the intolerable accompaniments of going into overdrive. Vertigo and nausea and all the sensations of an unconscionable, spinning plunge toward oblivion. Calhoun endured them doggedly. He was convinced that presently his eyes wouldn't work again and he'd probably have to crawl to move about on the ship. Anticipation of such undignified behavior was much more annoying than a mere attempt to kill him. He didn't bother to be angry about the missile.

While he felt relatively himself, he readied a meal for Murgatroyd and ate what he could, himself. He viewed with a certain detached amusement the idea that since he couldn't live to reach Headquarters, and couldn't land anywhere else without introducing the plague, he was using all the splendid technical equipment of a Med Ship, representing tens of millions of credits and the life achievements of many scientists and inventors, to put a small furry creature aground on an uninhabited world rather than leave him alone in an undirected spaceship.

"This," he told Murgatroyd while the little *tormal* zestfully ate the food he'd set out, "this is ridiculous! You'll be left alone anyhow and I've no idea how you'll make out—but . . ."

He shrugged. It would be absurd to make a dramatic production out of the business of dying.

"I'm going to put you aground and you'll have to fend for yourself. You'll probably think I'm unkind. You can't imagine my being unable to take care of you. But that's the fact. It's typical. I haven't done anything in particular."

Murgatroyd said cheerfully, "*Chee-cheel*" and finished his plate.

The *Esclipus Twenty* drove on. Presently, Calhoun's eyes went bad again. Later, he lost all ability to distinguish up from down, or sidewise from either. He sat grimly in the pilot's chair, with a cord knotted to keep him from falling out, which for some reason he considered necessary.

He probably slept. He waked, and he was horribly thirsty. He loosened the cord and let himself fall to the floor. With all his senses assuring him that the ship revolved, he made his way on all-fours—with several falls—to where there was drinking water. He drew a glass, and then solemnly poured it out on the way to his lips, which were responsive to the feeling that he had to turn the glass to prevent it from spilling as the Med Ship turned; but the ship didn't turn and the water was wasted.

Finally, he wedged himself against the wall and refused to believe anything but his eyes. He watched the surface of the water and denied all other evidence. He drank. He drank again and again and again.

Abruptly, he slept. Then he awoke, and acute nausea was just past, but dizziness had not woken him, and the feeling of spinning fall was only slightly different from the feelings he had all along. Now, Murgatroyd was plucking at him and chattering agitatedly, "*Cheel Chee-cheel Cheel*"

Then he knew that breakout had come, and the vision-screens were lighted, and he looked and saw a blazing yellow sun and innumerable stars. The ceiling speaker crackled and whispered as in normal space. The Med ship had arrived at the solar system of Delhi, where there was an Earth-type planet from which no ship had ever returned to its home spaceport.

There was a planet to be found, a world mostly of marshy sea with a single continent and the ruins of an abandoned,

depopulated human settlement. He would present Murgatroyd to this planet and that continent and those ruins, to make what he could of them. Because he, Calhoun, was shortly to be released from all obligations and could no longer take care of Murgatroyd.

When he was back in the pilot's chair he realized how weak he'd become, obviously, the effect of the plague nearing its terminal stage. He heard someone talking. It was himself, and he paid no attention. He searched for the planet, the planet that was of no use to anybody, from which no ship returned. He found it. It was astonishingly near. One part of his brain labored gravely with the computer and inexpertly made observations while another part talked nonsense, which he resented.

There followed a period of very great confusion. There seemed to be two of him, as there appeared to be two Murgatroyds and two electron-telescope screens and two control-boards. One part of his mind considered this improper, but another part gleefully took note that he had two right hands and two lefts, and watched with charmed attention as those hands simultaneously operated twin controls, and something gigantic grew more immense as the *Esclipus Twenty* approached it. He was absurdly surprised when it became a monstrous black hole in the universe of stars. The Med Ship had swung around to its night-side in an orbit Calhoun's then-disregarded sane brain-fraction had contrived. He seemed to sleep, and to wake again, and he was extremely thirsty. Suddenly, the sane part of his mind declared loudly, that there was a settlement! It showed on the electron-telescope screen! Then the part of his brain that was angry with the fevered part forcibly took charge.

The confusion he experienced did not lessen, to be sure. The part of a man which is his total consciousness, the part that uses brain-cells to store memories and present data for judgment, the part that uses brain-cells to control his body, the part which recognizes the phenomena of consciousness, that part, still functioned. One's brain can become an unreliable instrument, from fever or alcohol, but there is an ego, an id, a something, which struggles to make sane use of it. There were moments when he knew that he was singing and that his body was behaving in a fashion totally irrelevant to his situation and his purpose. There were other moments when he seemed to control his body which was astonishingly feeble, and he was clearly aware that he

had turned on the Med Ship's emergency rockets and that it was balancing on a pencil-thin, blue-white flame in mid-air.

Confusion came again. He was lecturing Murgatroyd on medical ethics. While he lectured, the Med Ship and all its contents turned somersaults, as did the planet outside. Calhoun knew that proper plants do not turn somersaults in their own skies, so he treated this behavior with the dignified contempt it deserved.

More chaotic sensations, so bewildering that they ceased to be impressions. Suddenly, there was a distinct thump, and he was shocked into rationality. He realized that the Med Ship had touched ground. He had cut off the rockets. He stared at the scene the vision-screen showed.

The *Esclipus Twenty* had landed in a swampy valley-bottom among low mountains; there was vegetation outside which swayed gently in a strong breeze. On higher ground he saw white, man-made walls with empty window-openings and tree tops showing where there should have been roofs. Close to the Med Ship there was swamp, marsh, stagnant puddles, and indigenous growing things.

Murgatroyd said, "*Chee-cheel*" in an anxious tone. Calhoun was weary beyond belief, but he roused.

"All right, Murgatroyd," he said dizzily, "I've done a very silly thing, and maybe I've done you no good at all, but if you'll follow me I'll finish it."

With an overwhelming lassitude, making his arms and legs seem to weigh tons, he left the chair by the control-board. He stayed on his feet almost half the way to the air-lock, by leaning heavily against the wall. Then his knees buckled under him and the rest of the way he crawled. At the inner air-lock door he reached up and by pure habit pushed the succession of buttons which opened both the inner and the outer doors. They rumbled wide, unsealing themselves. Air came in. There was the smell of mud and vegetation and unfamiliar life. There was also one particular odor which should have been unpleasing, but that it was so faint it seemed only strange.

"There!" said Calhoun. He waved his hand feebly. "There you are, Murgatroyd! There's a world for you. You'll be lonely, and maybe you'll die or be killed by some local predator, and maybe I'm doing you a dirty trick. But my intentions are of the best. Shoo! Get out so I can close the ports again."

Murgatroyd said, "*Cheel*" in a bewildered tone. It was not customary for Calhoun to crawl on his hands and knees and urge him out the air-lock. Calhoun was behaving strangely. Murgatroyd looked at him apprehensively.

"*Cheel*" he said. "*Chee-cheel*"

Calhoun did not answer. He felt himself slipping down to the Med Ship's floor. He was intolerably weary and weak. He was wholly confused. The sane part of his consciousness relaxed. He'd finished the task he'd set himself. If he rested, maybe he'd get back enough strength to close the air-lock door. It didn't really matter. It was annoying that he hadn't been able to get word of the Lanke situation to Headquarters, but the plague had been on Lanke before. The doctors knew it. They were terrified by it, but maybe . . . maybe . . .

Wryly, at the moment he believed his moment of death, Calhoun conceded to himself that he'd done the best he could. It wasn't good enough.

III

WHEN CALHOUN AWOKES, or at any rate regained consciousness, Murgatroyd was saying, "*Chee-cheel! Chee-cheel*" in his high-pitched voice. He sounded unhappy. There were smells in the air. Calhoun was not on the floor, but in his bunk. He heard footsteps and the sound of wind blowing. There were cracklings which were the sounds of the G.C. speaker reporting normal shortwave broadcasts from a nearby sun. There were other and unidentifiable sounds.

Calhoun opened his eyes. This instant, instinctive effort to sit up achieved nothing whatever. He was almost wholly without strength. He did manage to make a croaking sound, and someone came to the door of his sleeping-cabin. He didn't even see clearly, just now, but he said in a fretful tone and with extreme exertion, "This is the devill I've got a plague of some kind, and it's horribly infectious! You've got to set up some sort of quarantine around me. Get a doctor to the air-lock—don't let him come in!—I'll tell him about it."

A voice—a girl's voice—said evenly, "That's all right. We know about the plague. This is Delhi. We should know, shouldn't we?"

Murgatroyd hopped up on the bunk on which Calhoun inexplicably lay. He said agitatedly, "*Chee! Chee-chee!*"

Calhoun found his voice improved. He said as fretfully as before, "No doubt. No doubt. But—this is the devil!"

A surpassing bitterness filled him. There were people here where he'd landed. Inhabitants. He was a Med Ship man and he'd brought plague here! Quite automatically, he assumed that in some moment of unrealized confusion he must have set up the wrong course and drive-time in the Med Ship's automatic-pilot. He'd had four courses and timings at hand to give to the other ship encountered in space. He must blindly have used the wrong one when setting course for Delhi. . . .

The girl's voice had said this was Delhi! But it couldn't be! No ship had ever gotten home from Delhi! It couldn't be colonized! It had been tried, and there were ruins to prove it, but there was something wrong with it, something yet unknown but utterly fatal. No ship had ever returned. . . .

He couldn't stop to think of such things now. He'd brought plague here!

"Get a doctor to the air-lock door," he commanded as fiercely as his weakness would allow. "Quick! I've got to tell him. . . ."

"We haven't any doctors," said the girl's voice, as evenly as before, "and you don't need one. This is Delhi. There's no use in having doctors on Delhi! Not for the plague! You're all right!"

He saw, with clearing eyes, that a figure bent over him. It was a girl with dark brown eyes. She lifted his head and gave him a drink from a cup.

"We heard your rockets, Rob and I," she said in a tone from which all warmth had been removed. "We could tell you were landing. We hurried, and we got here before anybody else. We found you halfway out of the air-lock with a tame little animal crying to you, to wake up. So we brought you inside and Rob's watching now to see if anybody else heard you land. You can hope nobody did."

Calhoun decided that he was delirious again. He struggled to clear his brain. Murgatroyd said anxiously, "*Chee-chee!*"

"I suppose so," said Calhoun drearily. Then he said more loudly. "There has to be a quarantine! I'm carrying contagion. . . ."

The girl did not answer. Murgatroyd chattered at him.

It sounded as if, relieved now, he were scolding Calhoun for not having paid attention to him before.

Calhoun fell, tumbled, dropped, back into slumber.

It was a very deep sleep. A dreamless sleep. He came out of it an indefinite time later, when he could not tell whether it was day or night. There was silence, now, except for the tiny background noises from the tape. The air-lock door was evidently closed. Murgatroyd was a warm spot touching Calhoun's leg through the bed covering. Calhoun noted that his brain was clear. His fever was gone. Which could mean either that it was burned out, or that he was. In the latter case, he was experiencing that clear-headedness sometimes granted to people just about to die.

He heard a peculiar small sound. Someone—a girl—was weeping while trying not to make a noise. Calhoun blinked. He must have moved in some other fashion too, because Murgatroyd waked instantly and asked, "*Chee-chee? Chee-chee-chee?*"

There was a stirring in the control-room. The girl who'd given him a drink came in. She looked as if she'd been crying; Calhoun said, "I feel very much better. Thanks. Can you tell me where I am and what's happened?"

The girl tried to smile, not very successfully. She said, "You're on Delhi, to stay. We've locked the air-lock doors and nobody can get in. They've only banged and called, so far. Rob's looking over the ship now, trying to find out how to smash it so it can't possibly be repaired. He says you can't lift anyhow. The ground here is swamp. Your landing-feet have sunk in the mud and you can't possibly get clear. So that's all right for the time being."

Calhoun stared at her. He ignored the statement that the Med Ship was permanently aground.

"Delhi—locked doors—" He said incredulously, "Look! Delhi's not inhabited. Its air's wrong, or something! No ship that's ever landed on Delhi has ever gotten home again! Delhi doesn't have people. . . ."

"There are a good two thousand of them outside just now," said the girl as detachedly as before. "And every one of them will tear this ship apart with his bare hands rather than let you leave without taking them. But the swamp has taken care of that." Then she said abruptly, "I'll get you something to eat."

She went out and Calhoun groped for meaning in this addition to the improbabilities that had started on Lanke.

They'd begun with a dead man who apparently came from nowhere, and the terror he evoked in the medical profession of Lanke. There'd been the plague Calhoun contracted from the most cursory of examinations of that dead man, and the patched-up lifeboat quite impossibly encountered in space. It also couldn't have come from anywhere. Above all there was the plague, which on Lanke was horribly dreaded, but which this girl disregarded. Now there were two thousand inhabitants on the uninhabited planet Delhi who wouldn't let the ship leave without them, and there was somebody—his name was Rob?—who intended to wreck the Med Ship so it couldn't leave at all.

The sum of all this was bewilderment. For example, the plague. He didn't have it any more. It was a spontaneous recovery. If its victims recovered, why the terror on Lanke? Also, why were there two thousand people who wanted to leave Delhi, and somebody named Rob who didn't want anybody to leave—not even Calhoun.

He puzzled furiously while he waited for the girl to return. He heard movements. Somebody came up into the control-room from the storage decks below. He heard voices. If that was Rob, he'd reason to be uneasy. He called. A tall, broad young man of about his own age looked in the door.

"You're Rob," said Calhoun politely. His voice was stronger than he'd expected. "Would you mind telling me why you want to wreck my ship? I'm told that it's hopelessly bogged down in marshy ground now. Why add to the disaster by wrecking it?"

"Enough men," said the young man, with some grimness, "could dig it out. And then it could go away. That has to be made impossible!"

"But this is a Med Ship!" protested Calhoun. "It has a special status!"

"And this is Delhi," said Rob sternly. "There's a plague that's native to this planet. We who live here don't have it. If someone comes here with it, he recovers. But if we leave, we develop it, and if anyone from here landed on another world, he'd die of it with the people he took it to. So nobody must leave!"

Calhoun considered for a moment.

"But somebody has, not long ago. In fact, I caught the plague from him."

He couldn't have proved the connection of the dead man on Lanke with the freakish spaceship and that with Delhi,

but he believed the connection was there. The man named Rob proved it by grinding his teeth.

"A crime!" he said fiercely. "And maybe we'll be bombed for it! It's another reason this ship has to be wrecked. We're quarantined. We have to be! The quarantine mustn't be broken!"

Calhoun considered again. There were people on Delhi, not less than two thousand of them, who would seize this ship if they could, take aboard as many as could crowd into it, and go on to other worlds where—obviously—they did not believe the plague would appear. On the other hand, there were people who knew that they'd die of the plague if they ever landed on any other world, and the plague would spread from them. The two views were contradictory, and Calhoun was for the moment in between them. He was sure the plague could be spread, though. He'd caught it. Those who wanted to risk everything to leave Delhi and escape whatever they hated here, they wouldn't listen to argument or listen to evidence. Such states of mind are standard with a certain proportion of any population.

Calhoun rubbed his nose reflectively. "This plague and this quarantine hasn't been reported to the Med Service," he observed. "When did it start, and why?"

"Delhi's been quarantined since the first ship landed," said Rob, grimly. "A ship came by and sent a lifeboat down to explore. It reported valuable minerals. The ship went back to Lanke—it hadn't landed—for equipment and supplies while the spaceboat explored further. They didn't know about the plague."

"It hadn't appeared?"

"No. The ship went back to Delhi and landed with machinery and supplies. They opened one mine. They built a settlement. They loaded the ship with ore. It went back to Lanke."

He paused dramatically. Calhoun said, "And . . ."

"It never got there! It simply never arrived. Months later an automatic distress-call was picked up from far out beyond the Lanke solar system. A ship went out to investigate. It was the ship from Delhi, floating where it had broken out of overdrive. There was no living creature aboard. Everybody was dead. It was the plague, but they didn't understand. They towed the ship to port and unloaded it; plague spread over the whole planet. They had to burn

down cities to get rid of it! Delhi has been quarantined ever since, more than a hundred years!"

"The Med Service should have been told," said Calhoun, annoyed. "Something would have been done about it!"

There was a sudden metallic clanging. It was a blow of something heavy against the Med Ship's exterior air-lock door. There was another blow, and another, and another. Rob listened for a moment and shrugged.

"Sometimes," he said, "there's somebody dropped to us by parachute. They have the plague. They recover. They tell us what other worlds are like, now. They don't often get reconciled to staying here!"

The clanging continued. The girl came in from the control-room. She said in the same detached voice, "They're trying to break in with sledge-hammers. But some of them are cutting down trees and trimming them." She looked at Calhoun. "We can help you into the other room if you want to see."

Calhoun found himself struggling to rise. The tall man helped him. The girl said, "Rob has one thing wrong. Not all the people who're parachuted down to us have the plague!"

Rob made a deprecating sound. Calhoun began to move toward the cabin door. He was stronger than he'd thought. Once he was up, with the help of Rob on one side and the wall on the other, he made his way into the control-room. Rob helped him into the pilot's chair at the control-board.

He stared at the vision-screens. The *Esclipus Twenty* had landed in a marshy, meadow-like level space with mountains all around it. He could see the white walls of what had been a settlement on a mountain side, but it was plainly abandoned. There were only walls. Trees grew all the way down into the valley bottom, and men swung axes among them. As he looked, a tree toppled. Others had already been felled. He swung an outside pick-up to look down the Med Ship's side. A brawny, red-headed man was swinging a sledge-hammer against the sealing strip of the door. The impacts rang through the ship. Calhoun could see, too, where the flat parts of the landing-fins had pressed into the soggy soil. They'd sunk a good two yards below the surface and mud had flowed in over them. They were well buried.

"I'd guess," said Calhoun, "that they're cutting down the trees to make shears from which they can swing a batter-

ing-ram. I doubt that a sledge-hammer can break the air-lock door. But a heavy enough log, swung hard enough, might do it. There are a lot of people here!"

The valley floor was black with human figures. There were at least two thousand of them, staring at the Med Ship, moving about restlessly, or standing in groups on the ground that might support a man, but not a spacecraft standing upright and heavy. Still others labored at the cutting and trimming of trees. There was somehow an air of tenseness, of impassioned feeling among the figures. Calhoun flipped on the outside microphones and the noise they made became audible. There was a growling, hurried murmur of voices. Sometimes, there were shouts. It was not a group of curiosity seekers, here to look at a spaceship come to ground where spaceships never came. It was a mob. It made the sound of a mob.

"Don't they know there's somebody alive in here?" asked Calhoun.

Rob said hesitantly, "I wanted to disable the ship. I thought it might take some time. So when we found they were coming we closed the air-lock and didn't answer the calls on their bangings on the hull. I think they've decided that somebody landed the ship and then died."

The girl said detachedly, "Not long ago they finished mending a lifeboat that was wrecked here generations ago. They went to Lanke, and they came back. One man didn't return. . . . They'd hidden their ship under water. Maybe he couldn't find it after he found what he was looking for. They may think that maybe he managed to steal this ship from the spaceport and has just gotten here. It could have been. He could have been wounded. He could have landed the ship and died."

"Only he didn't," said Calhoun with some dryness. "He didn't get at the spaceport. He developed the plague instead. He gave it to me. And I met the lifeboat, too. I think I was of some service to them."

He didn't mention that for payment the freak spaceboat had fired a missile at the Med Ship. Even that was reasonable as things became clearer. If Delhi was a quarantined world, with not enough of a population to maintain a modern civilization, it would have to go back toward the primitive and the savage. The desperation of its inhabitants would be absolute. If they could manage to cobble a long-wrecked spaceboat so it could take to space, and if because of

the plague all nearby planets were its enemies, astronauts from Delhi would feel justified in destroying the Med Ship to keep their secret from becoming known. They'd do it in the hope of going on to a successful breaking of the quarantine that held them on this intolerable world. Yet the plague made that quarantine necessary.

"It must smell pretty bad out there, with all those people moving about," said the girl abruptly.

Calhoun turned his head.

"Why?"

"It's marsh," said the girl. "It smells when it's stirred up. It's strong! They say that on other worlds it isn't bad. Here it is. When new people are parachuted down to us, they hate it. We're used to the regular smell of things, I suppose. We don't notice. But we don't like to stir things up. Then we notice!"

Calhoun said, "Marsh . . . how about water?"

"At worst we boil it," she said evenly. "It isn't as bad, then, as un-boiled. Sometimes we filter it through fresh charcoal. That's better. There's a dam with electric generators that were installed for the mine. Some of us run that to electrolyze water into gases that we burn back together again. The flame destroys the cause of the smell, and then we condense the steam the flame combines to. That's the best, but it's a luxury and we can't afford luxuries." She looked at the vision-screen. "There are charcoal breathing-masks for working when you have to stir things up. But making charcoal isn't fun, and it has to be fresh or it doesn't work. There aren't many masks out there. It must be pretty bad."

Calhoun looked at her for long seconds.

"Have you tried my drinking water?"

She shook her head. He made a gesture. She drew water from the spigot by the food-readier. Her expression changed.

"Water tastes like this? All the time?"

She pressed a glass on Rob. He tasted it and handed back the glass.

"That," she said fiercely, "is enough to want to leave Delhi forever! I'll never taste water again without thinking of this!"

Calhoun said suddenly, "You speak of new people parachuted down. Why are they sent here?"

Her lips compressed.

"Some have the plague, not many. A case turns up now

and then, they say, leftover infection, maybe, from the plague they had on Lanke . . . from the other planets. . . .”

“Yes,” said Calhoun. “The other planets! Which ones?”

She named three, besides Lanke. They were the three whose names and courses he’d offered to the cobbled space-boat he’d encountered in space. They were the three colonized worlds closest to Lanke. If they sent unwilling colonists to Delhi, which they could not ever hope to leave, it was simple enough to understand that the men in the freakish ship wouldn’t accept Calhoun’s suggestion of them for destinations.

“How’d they get into the picture. It was Lanke that had the plague, wasn’t it—and hid it?”

The girl shrugged.

“People were sent here later, from the other planets; they say that the government of Lanke got frightened, years and years ago, that another nearby planet might try to colonize Delhi as they’d tried to do. And it might get the plague, and it might re-infect Lanke. So as a state secret, it told the nearest planets why they mustn’t explore Delhi. They checked on it. One of them sent a research-team to try to make Delhi usable, because there are minerals here. But they couldn’t do anything, and they couldn’t go home. So for a while supplies were dropped to them. They lived all right, but they couldn’t leave. Presently, it occurred to somebody that Delhi would be a good place to send life prisoners, criminals. So they did. Then they sent political offenders, it was very discreetly done—now . . .”

“Now what?”

“It’s said that the crime-rate on the four planets is very low,” she told him bitterly, “because professional criminals—disappear. It saves the cost of some prisons and guards and the expense of a free criminal class to the others. So we’re the sweepings of the four planets. Some of us were accused of having the plague when—we didn’t. Naturally, it’s all very secret!”

She looked at him defiantly. Calhoun nodded.

“That’s quite possible,” he admitted. “In any case it would be told, and the people who told it would believe it.”

The girl looked at him with angry eyes and compressed lips.

“Some of us,” said Rob severely, “accept the facts. We aren’t all wrapped up in our own tragedies. Some of us

think of our inevitable obligation to humanity at large. So we won't try to leave, and spread the plague!"

Rob frowned portentously. There was friction between these two. The girl clenched her hands. The sledge-hammer struck again, and again, and again. There was likely to be a quarrel between the man and the girl who between them had quite probably saved Calhoun's life. So he said dryly, "Swinging that sledge must be fatiguing. In fact the whole situation outside seems unfortunate. I'll change it."

He moved certain switches. He adjusted a dial. He pressed a button.

A pencil-thin flame shot down from between the Med Ship's landing-fins. It was pure, blue-white incandescence. It was the ship's emergency-rocket, on which it had landed and by which it would have to take off again. For an instant the flame splashed out between the fins, and it was so bright that the daylight nearby seemed darkened by contrast. Then the flame bored down. In solid stone the *Esclapus Twenty* could melt and boil away bed-rock to a depth of eighty feet. Here, in saturated meadow soil, enormous clouds of steam and smoke arose. Steam-loosened mud flew about. It looked as if the Med Ship squatted on a monstrous arc-flame which was blasting away the marsh on which it rested.

The flame cut off. It had burned for ten seconds or less, developing—under control from the pilot's chair—something less than one-eighth of its maximum power. The ship hadn't stirred.

"I suspect," said Calhoun, "that they think I tried to lift off then and couldn't. But maybe they'll think I could make a battering-ram crew very uncomfortable, close to the ship as they'd have to work."

He watched the running figures below. There was no longer a crowd gathered about the Med Ship. Those nearest were in headlong flight. The red-headed man who'd been swinging the sledge crashed a way through those fleeing ahead of him. The roar of the rockets had stopped. Some fleeing men began to glance around them as they ran.

Then the mob ceased to flee. It formed a circle three hundred yards across, two thousand human beings facing inward. Some of them shook clenched fists. The outside microphones brought in a babbling, yapping noise that was not great in volume but appalling in the fury it expressed.

"They're not thinking straight," said Calhoun. "There are

two thousand of them. Even if they could land somewhere and not die of the plague or carry it, even if they could, how many would this ship carry? How many could its air-renewer supply?" Then he said in a different tone to the girl, "You said that not everybody who's parachuted down to Delhi has the plague. Why else should they be dropped here?"

She said fiercely, "It's a way to get rid of people! It's politics! It's crooked! Anybody can be accused of having the plague. Sometimes they do have it. But sometimes they haven't. My father didn't have it, and he was sent here. Rob's grandfather didn't, and he was too. There are others!"

Calhoun nodded. He said thoughtfully:

"That may be true, because there was opportunity for it. But, true or not, people would believe it. And I guess, too, that you tell each other that the plague's worn itself out. Nobody has it here. Nobody who's landed here ever gets it. If they have it when they come, they're cured immediately. I was! So how could they give it to anybody else?"

"Yes!" said the girl passionately. "That's it! How could we? Rob says we have to stay here! Here where the food has no taste, and the water. . . . Where we're made nauseated when we plow the ground to grow food! Where . . . Rob says we shouldn't marry and shouldn't have children because they'd be doomed in advance to become savages! He says . . ."

Rob said unhappily, "I think that's true, Elna."

"How could it be true? How could a disease that nobody can have be carried by anybody?"

Calhoun stirred in the pilot's chair.

"I think," he said apologetically, "that I have to get back to my cabin. The plague I had has made me ridiculously weak. But I have to admit, Elna, that I caught the plague from a man who left Delhi and went to Lanke and immediately developed the plague. Rob is right. Nobody must leave Delhi, but me. I have to get some help from Med Service Headquarters. Nobody else must leave. Nobody!"

Rob helped him into his cabin again. He sank gratefully down on his bunk. The girl Elna came in minutes later with another bowl of broth. Her expression was equal parts rebellion and despair. Calhoun was suddenly so sleepy that the spoon fell from his fingers. Rob supported him while Elna fed him, spoonful by spoonful. He was totally asleep the instant she'd finished.

Elna waked him by shaking his shoulder, he didn't know how long afterward. Murgatroyd made shrill protests. Calhoun waked easily and completely, and on the instant he knew that a surprising amount of strength had come back to him. With less than a desperate effort he actually sat up. He swung his feet over the side of the bunk. He became confident that he could walk, if in a wobbly fashion. However, he still wasn't up to rough-and-tumble exercise.

"Rob's gone down," said Elna desperately, "to start smashing up the ship's drive so it can't possibly be repaired!"

"Go tell him," said Calhoun, "that the drive-units from the lifeboat just back from Lanke can be used in this ship. They'll smash the quarantine. Wrecking my drive won't stop them. Anyhow the crowd outside will tear us all to small bits—including you and including Rob—if they break in and find the ship's been smashed after landing. Tell him to come up and I'll give him better instructions."

She searched his face briefly and hurried away. He heard her footsteps clattering down the metal stair to the lower parts of the Med Ship. Murgatroyd said, "*Chee?*"

"Of course not!" said Calhoun severely. "We are members of the Interstellar Medical Service! We can't let a situation like this keep on! I should be able to stand up, now, and do something about it. Let's try!"

He found a handhold, and with arms and legs working together he got to a standing position. He was still uncertain in his steps, and his expression went wry. Finally, he got across the cabin. He opened a closet and found a robe. He put it on. He made his way unsteadily into the control-room. He opened another cupboard and brought out a blaster, almost a miniature, for the pocket. He adjusted the strength of its bolt and put it out of his robe. He went dizzily to the pilot's seat at the control-board. He threw the G.C. switch.

"General call!" he said into the transmitter. "General call! Med Ship *Esclipus Twenty* calling repaired spaceboat or any other ship. General call!"

He waited, blinking at the vision-screens. There were still very many people outside. A good proportion seemed to be laboring where the trees of the nearby mountainside ceased to grow because the ground was too marshy for their kind. He saw a disturbance. A chopped through tree trunk fell.

"General call," he repeated patiently. "General call. Med Ship *Esclipus Twenty* calling repaired . . ."

A rasping voice interrupted. It was a familiar voice to Calhoun. He'd heard it during that improbable encounter of two ships in between-the-stars. Now it said unpleasantly, "*You followed us, eh? What for?*"

"Clinical information," said Calhoun. "One man of your crew didn't come back to Delhi with you. He had the plague. In fact, I got it from him. He's dead now, by the way. Why didn't the rest of you get it?"

The voice growled, "*What're you asking me for?*"

"I'm landed on Delhi, in a swamp," said Calhoun. "It looks like I can't lift off, because I'm mired here. There's a crowd—a mob—outside, trying to contrive a way to break into my ship so they can take it over, dig it out, and lift off for somewhere else. After they break in I'm not likely to get much information. Information like the information that tells me you hid your boat underwater while somebody went to figure out the chances of seizing a ship there by surprise and getting aloft on emergency rockets. That was the idea, wasn't it?"

The harsh voice was very harsh when it demanded, "*Who told you that?*"

"Never mind," said Calhoun. "But you didn't send only one man! How many?"

A pause. The other voice said cagily, "*There were two. But one began to see double and came back.*"

"Which," Calhoun observed, "was proof that when people from Delhi land on another planet they develop the plague. You'd stopped believing in that. But it was so. It pretty well killed the idea of seizing a ship without warning, picking up a crew on Delhi and moving on to seize yet other ships and break the quarantine to small and quivering bits. Right?"

The voice grated, "*What are you driving at?*"

"I'd like some cooperation," said Calhoun. "You know you can't work that scheme now! You've promised to break the quarantine by force. Now you're afraid to admit it can't be done. Right?"

"*What—are—you—driving—at?*" rasped the voice.

"I'm Med Service," said Calhoun. "Tell me what you know about the plague, tell your followers to leave my ship alone and to gather information and biological specimens I ask for. Then we'll have the Med Service taking over as it

should have done a hundred years ago. Shortly, there'll be no more plague and no more quarantine."

Silence. What Calhoun proposed was sound sense, but it was not the sort of sound sense that people would accept. The Med Service was not a reality to the people of Delhi, and the quarantine was, and was moreover the deliberate act of the nearby occupied worlds. They were imprisoned on a world which stank, and when its surface was disturbed it reeked, and even drinking water had to be boiled before it could endurably be drunk. They could have no modern tools, lest they contrive some way to damage its enemies. They could have no science, because they had to be kept imprisoned. Men will not endure such conditions, necessary or not. They won't endure them!

Calhoun said evenly, "I know I'm asking a lot. There's a mob outside my ship now, contriving some way to break into it and seize it, so they can raid a spaceport somewhere and seize other ships to repeat and spread their revolt, and the plague! But you know it won't work! You can leave Delhi a thousand times over, but if you take the plague with you . . . it's no good!"

Silence. Calhoun, waiting, shook his head to himself. Delhi had had a century of isolation and hopelessness, and the arrival of other hopeless prisoners only reminded them of the intolerable nature of the lives they lived. Under such conditions men forget what they don't want to remember, and somehow come to believe everything they wish to be true. They'd developed a blind irrational belief that their imprisonment was unnecessary. They'd developed an unreasoned, impassioned faith in possible escape. They'd rebuilt a shattered spaceboat, learning the functions of the apparatus they rebuilt as they rebuilt it. They'd set out to accomplish the impossible.

Calhoun was asking them to abandon all efforts to help themselves, and depend on a Med Service of which most of them had not even ever heard. They couldn't do it. Especially not with the *Esclipus Twenty* aground and needing only to be overwhelmed and then extracted from the marsh for their most desperate needs to be fulfilled. They'd only been told of the plague. They didn't have it. They didn't see it, and they were imprisoned because of it. Few of them really believed in it, as Rob did.

So Calhoun was not surprised when the rasping voice

cursed him horribly and cut off communication without bothering to reply. It was a refusal.

His expression was wry as he said to Murgatroyd, "He's a disappointed man, Murgatroyd. That's why he's suspicious and angry. But I'm disappointed too. I think he could have found out things for me that I'll have trouble learning myself."

Extra movement in a vision-screen drew his eyes to it. A felled and trimmed tree trunk moved from its place toward the Med Ship. It was carried by not less than fifty men, holding to short ropes passed under it. The people of Delhi had no wheeled vehicles to carry so great a load. If they'd owned them, the marsh would have made them useless. However, they did have arms and muscles. By pure brute strength, sweating in their toil, they brought the log slowly down into the valley. Calhoun had never seen the physical strength of fifty men applied to a single effort. Men used engines or machines for such work. This was like those legendary achievements of barbaric kings and pharaohs. Had they been moving stones, had there been whips crackling to urge them on, he'd have felt that he saw the process of the building of the pyramids on Earth, which were still mentioned in primary grade school texts all over the galaxy.

Then he heard the girl Elna and the man Rob coming up from below. Rob said in icy fury, "You're a woman and I'd have had to hurt you to keep you from interfering. It's because you've been listening to him! He persuaded you, but millions would die if this ship lifted off and went to another world! So I'm going to stop his persuading! Sick or well, if I have to hurt him . . ."

"But, Rob!" protested the girl. "Think, if it's true! Think! If there's a Med Service and if it can end the plague for always, think of us! You wouldn't feel that we mustn't marry. You wouldn't think there should be no children to become savages! And we could be so happy. . . ."

Calhoun raised his eyebrows. Murgatroyd said, "*Cheer!*" in what happened to seem a very cynical tone. The heads of the man and girl appeared at the top of the stairwell. Rob's eyes were hot and accusing.

"You!" he cried furiously at sight of Calhoun. "This ship in the hands of the fools outside could mean all the human race wiped out! Don't you see it? Nobody must leave Delhi! Nobody! And as a beginning . . ."

They reached the floor of the control-room. Rob's hands clenched and unclenched. He moved slowly toward Calhoun, glaring in a very dramatic fashion.

"You display a very noble character, Rob," said Calhoun with some irony. "Self-sacrificing, too! It must be very satisfying to feel that way! But I almost agree with you. It's true that nobody must leave Delhi. Nobody but me. If you can't agree to that, we'll have to settle it right now!"

He drew the pocket-blaster from under his robe.

IV

THE SETTLEMENT was necessarily on Calhoun's terms. Calhoun had a weapon. Rob didn't. Calhoun wanted to do something. Rob wanted to keep something from being done. Calhoun was an essentially simple person, inclined to think of objective results in completely matter-of-fact terms. Rob reasoned emotionally, with much attention to noble ideals he was unable to compare with reality. Calhoun considered that he had a job to do. So the matter had to be settled as he decided. Rob had a very fine stock of invective and a splendid equipment of scorn. He made use of both in what he obviously considered an especially fine opportunity for stinging speech. But it was only speech. Calhoun listened unmoved.

"All right," he said presently, with some grimness. "That'll be enough. You've got it off your chest. What do you do now? Play along or sulk over it? I have to leave this place, for Med Headquarters. I need, right now, some mud from the swamp outside for what should be obvious reasons. You can get it. Will you?"

Rob ground his teeth. He refused, eloquently. Calhoun shrugged. Elna said, "I'll get it."

She did, while Rob glowered. It was only a matter of cracking the air-lock door and reaching down with a long ladle, while Calhoun watched the vision-screens for signs of mob action. He literally wasn't up to the physical effort of getting a mud-sample. There were infuriated shoutings from the mob outside. Men hunted for stones to throw. There weren't any, on the surface of a semi-swamp. Elna brought

up a ladle-full of black stuff with evil-smelling water on top of it. She silently gave it to Calhoun. He put the mud into a centrifuge to separate the solid matter from the water that saturated it. He sat down, to rest while the centrifuge ran. Rob glared at him in the extremely unhappy state of a man with impassioned convictions he couldn't act on. He was doubtless quite capable of dying for the sake of an abstract humanity. The high drama of such an action would certainly help him do it.

The centrifuge delivered pellets of damp soil and a considerable amount of browning, malodorous water. It had been stirred and—as Elna had mentioned—it smelled very badly. The air in the ship was Delhi air, now, and doubtless it reeked also, but not so strongly that one couldn't get used to it. However, getting used to the smell of stirred swamp-water was another matter.

Calhoun roused himself. He filled a culture-slide almost full of the unpleasant stuff. He put it in the culture-microscope which would let him watch living microbes living. A six-inch screen beside it showed the magnified image. He watched.

Without electronic amplification of the image, it was not possible to watch living microscopic creatures at high magnification. For genuinely high optical power, much light would be required on the slide. Beyond a certain point, that light would be lethal to microbes. But electronic amplification made a sharp, clear image of everything in the culture-slide. He saw the equivalent of an amoeba. He noted that it seemed furry. He saw the equivalent of rotifers. They spun madly for a certain time, and then stopped and spun as madly in an opposite direction.

Then he saw the spherical, pigmented microscopic spheres he was looking for.

But these microbes did not dance. They did not fission feverishly. They moved, but very slowly. Doubtless, they did multiply, but Calhoun saw no example of it. Save for lack of activity, though, they were twins of the plague organism.

"Ever hear of ecology, Elna?" asked Calhoun. "I think I'm observing a micro-ecological system at work."

The girl shook her head. She looked at Rob. He sat with his arms grandly folded. Calhoun didn't notice. He said, pleased, "Microbes adjust to their environment, like larger things. And like larger things, their numbers in na-

ture depend on very complicated processes. Small animals multiply fast, because they're eaten by larger things. Larger things multiply slowly, because if they multiply too fast they wipe out their food supply and starve. There are some very curious causes for the limitation of animal populations so they won't all starve to death. *If this bug I'm looking at is what I think it may be, it's a most interesting example.*"

The girl did not seem to hear him. She looked at Rob. He ignored her, with conscious tragic dignity. She'd helped Calhoun.

"Here," said Calhoun, "are what look like plague-microbes in their normal Delhian environment. They're sluggish and practically comatose. Phagocytes could take care of an invasion of them into a human body. But here—" He touched a culture-bottle in which he had thriving plague-microbes growing, cultured from a scrap of a dead man's clothing. "Here I have what may be the same bug in a Lanke environment. The bug is wildly active. It could cause the devil of a plague, on Lanke. I'm going to see what it would do on Delhi."

He looked up for an expression of interest. The girl looked unhappily at Rob. Calhoun stared, and frowned, and shrugged. He took up a pipette which might have been made for the smallest of dolls to use. He introduced dancing, swarming, preposterously proliferating microbes from the Lanke culture into the slide of Delhi swamp-water.

Rob said harshly, "They're bringing a log to be a battering-ram, since the sledge-hammer didn't work."

Calhoun looked at the outside vision-screen. The log was moving slowly across the marshy ground on fifty pairs of feet. It looked like a monstrous creeping insect.

"They're stumbling," said Calhoun. "They can't batter while they're stumbling."

He turned back to the culture-microscope. The half-drop of liquid from the pipette had contained thousands and thousands of the dark round microscopic spheres. They showed on the screen, now: dancing, swarming, dividing into half-globes and growing back to full spheres again. Their activity was more than feverish. It was frantic.

In minutes it diminished. The dancings and dartings slowed. The infinitesimal objects ceased their headlong multiplication. They became languid. Gradually, they seemed to sleep. Now and again they made trivial, stagnant motions. They were not dead. They were not spores, they

were no longer active. Calhoun regarded them with satisfaction. He said, "Ah-h-hl"

It was a most gratifying development. It couldn't have been observed on Lanke, because there was no Delhian material to show it. It couldn't have been seen on Delhi. There were no super-active specimens on Delhi. Only a Med Ship man could have made the observation, with Med Ship equipment. Calhoun looked triumphantly about. Elna still looked unhappily at Rob, and Rob still wore an air compounded equally of fury and of martyrdom.

"Murgatroyd," said Calhoun, "at least you'll be interested! Things are looking up!"

"*Chee?*" said Murgatroyd.

He padded across the floor and swung up to the lab table unfolded from the wall. What Calhoun was doing meant nothing to Murgatroyd, of course, but Calhoun had invited him to conversation. Murgatroyd peered at the microscope-screen as if it meant something to him. He said, "*Chee-cheel! Chee-cheel!*"

"Exactly!" said Calhoun. "This bug is comatose on Delhi, where there is no plague. It's wildly active on Lanke, where there has been, can be, and probably already is plague. We'll return these bugs to a Lanke environment."

He made it, distilled water and a nutrient substance for them to feed on. It was practically the environment of Lanke. He returned the just-made-comatose microbes to the sort of environment in which plague-germs thrive. These microbes regained all the enthusiasm of multiplication and dancing and—doubtless—the production of deadly toxins they'd shown before.

"Something on Delhi," said Calhoun, "slows down their activity and reduces their breeding-rate as something on other worlds keeps the bigger predators from getting too numerous. Something here keeps their numbers down, and that something doesn't, on Lanke. What would you guess, Murgatroyd?"

Murgatroyd said, "*Cheel!*" He moved about the lab table, with a very fine air of someone checking the various bits of equipment there. He picked up a culture-slide. He sniffed at it and said, "*Chee-cheel!*" in a very disapproving manner. He dropped it, and swamp-water spilled. The odor was actively unpleasant. Murgatroyd sneezed, and retreated from it. He said, "*Cheel!*" and rubbed his nose vigorously.

Calhoun shrugged. He mopped up the spilled half-

spoonful. He had visions of living on a world where soil and swamp-water stank when disturbed, and where even sea water might do the same. Where one boiled water before drinking it, not to make it germ-free but to drive out most of the taste. Elna had tasted normal water and had told Rob bitterly that she'd never taste water again without remembering how that pure water tasted.

He looked at the vision-screens. There were fluffy white clouds in the bluest of blue skies. All oxygen atmosphere planets have blue skies, and those with habitability-one temperatures have winds and jet-streams and storm-patterns of strictly standard types. On all the worlds with vegetation there were the equivalents of trees and brushwood and grass. The look of Delhi was not repellent, if one could only get used to the smell of the atmosphere, and not of the soil—if the reek of the swamp was simply an exaggeration of what everything smelled like and one could never fail to notice it . . . the passionate desire of its people to leave it could be understood.

The first log was almost at the Med Ship. A second was on the way. Smaller groups were bringing shorter logs. There were men coming with coils of rope.

Calhoun regarded them detachedly. He saw a man stumble and fall, and get up and be sick because of the stench of the mud he'd disturbed.

Calhoun went back to his work. He set out minute samples of swamp-water, and added infinitesimal dosages of reagents to each, and then still more minute quantities of the Lanke-environment, frantically active culture. Then a check to see what substance—or what substances made up a group—removed by a reagent would allow the spheres to thrive in swamp-water.

It could almost have been predicted that the elaborate set-up for research would be useless, and something insanely simple would give the answer. A strip of filter-paper, wetted with the active culture and in a stoppered bottle with a trace of swamp-fluid, that showed the active culture stopped dead. It did not touch swamp-water. It was exposed only to the reek, the stench, the effluvium of the swamp. Calhoun said, "The devill" Painstakingly, he repeated the test. He wanted to talk about it, to explain it for his own hearing so that he'd know if his reasoning made sense. He said, "Murgatroyd!"

Murgatroyd said with an air of charmed interest, "*Cheer*"

"I've got it," said Calhoun. "There is something in the swamp-water that slows up the plague-germs in multiplying and producing toxin to kill us humans. It's an inhibitive factor like the factors that on different worlds make large carnivores breed slowly, because if they bred fast they'd wipe out their own food supply and die of starvation. In the micro-ecology of germs in Delhi, there's something that holds down plague germs so nobody can get the plague. But on Lanke that inhibitive factor's missing."

Murgatroyd said, "*Cheel*," and, beady-eyed, watched Calhoun's face.

"I'll bet you a hogshead of coffee to a cookie," said Calhoun exuberantly, "that it's nothing but the smell, the reek, the stink of that—Hal!" He referred to the Stellar Directory. He found Delhi. "Here it is! There's a methane derivative to point oh four percent in the planet's air, about the same as carbon dioxide! Maybe there's a bug in the ocean that produces it. Maybe—oh, anything! There are microbes that can't live where there's oxygen and others that can't live where it isn't. This is a microbe that can just barely live where there's point oh four percent of this stinking stuff. But it goes wild where there's . . . now! You see, Murgatroyd? A ship from here, with Delhi air, could go to Lanke and nobody'd have the plague. But a man from it would develop the plague when he got out into Lanke air which hasn't the methane that holds the plague-germ back! A ship from Lanke that left Delhi without Delhi air in its reserve-tanks . . . everybody aboard would die of the plague on the way home! You see?"

Murgatroyd said, "*Cheel*"

The girl Elna said uneasily, "They're setting up some sort of—thing made out of the logs."

Calhoun looked. There was no battering-ram support being erected. There were two short logs upright, and heavy logs crosswise, and a very long log with numerous cross-pieces fastened to it lying in the disturbed ground. Men were working with ropes. It wouldn't make an effective battering-ram. However, Calhoun was too much elated to give thought to the engineering feat in progress outside. He wanted to verify what was at once plausible and lacking proof. Proof would be finding a highly volatile liquid or a condensable gas in solution in the swamp-water. He most definitely had the equipment for seeking it. He used his swamp-water sample recklessly. He did a reduced-

pressure fractionating still-run, which could take a full tablespoon full of swamp-water and by precise control of the temperature and pressure draw off dissolved air, dissolved carbon dioxide, dissolved . . .

He got enough of a condensable vapor to be visible under the microscope. With the beautifully exact temperature-control he had, he found its boiling-point by watching that infinitesimal droplet disappear as vapor, and re-condense as a fluid as he sent the temperature up and down, watching through a microscope.

Elna said uneasily, "They're getting ready to do something. . . ."

Calhoun looked at the screen. Men swarmed about an area twenty or thirty feet from the Med Ship's outer plating. They had ropes fastened here and there. They were arranging themselves in long rows about the ropes. There were hundreds of them preparing to do something with the logs. Away over at the edge of the slanting ground, there was much smoke. Men worked at something involving fire. Men shook their fists at the Med Ship, ready to grasp and haul on the ropes they'd brought and placed.

Calhoun blinked. Then he said, "Clever! That's really a beautiful trick! They're sure we can't lift off, so they're going to take the ship with the minimum of damage. . . . That's really brilliant!"

Rob said fiercely, "When are you going to start smashing the ship?"

"I've much more important things to do," said Calhoun. "Much more important!"

Almost hilariously, he threw the G.C. switch and began to call: "General call! General call! To repaired lifeboat. Med Ship *Esclipus Twenty* calling repaired lifeboat! Top emergency! Come in, repaired lifeboat!"

As he called, he regarded the work outside, which now approached a climax of activity. Men were making sure that ropes lying on the marshy ground were exactly laid to be pulled on. Other men were lining up to haul on those ropes. Leaders arranged them exactly to get the maximum of traction in exactly the proper directions-of-pull. A group of men were bringing something which gave off a thick white smoke. They kept out of the smoke.

"Calling repaired lifeboat! This is urgent! I've found out how the plague works! Calling repaired lifeboat. . . ."

A voice said in icy rage, "Well?"

"The plague," said Calhoun, "is a spherical microbe which can't be anything but sluggish in Delhian air, sea, ground, or swamp land, because there's some sort of methane derived compound which inhibits its growth. The compound that makes soil reek when it's disturbed, that you drive out partly when you boil water, that's the stuff that keeps the plague-germ inactive. It was in the air you breathed when you went to Lanke. It was in the air you breathed when you kept your boat hidden underwater while two men tried to make it to the spaceboat. Do you understand?"

The rasping voice said suspiciously, "*What're you telling me for?*"

"Because when your two men tried to make it to the spaceport on Lanke, they were breathing air that didn't smell, and didn't hold back the plague-germs from multiplying. One man went back when he saw double. Back in your ship the air stopped the germs from multiplying and he got over the plague. When I breathed Delhi air, I got over it. But one man panicked when he found he had the plague. He went to the Health Department and tried to give himself up as a plague victim. He hoped to be carried back to Delhi and to life. But they killed him."

There was a growling sound from the G.C. speaker. Calhoun said, "The Med Service can handle this, but I've got to get to Headquarters! There's a mob outside my ship, getting ready to break in. I'll be wrecked! I need somebody to stop the mob from breaking in and wrecking this ship, which is needed to take these facts to Med Service Headquarters. As a matter of common sense, you'd better come here and stop them."

A pause. Then a growled, "*We'll be there!*"

Calhoun grinned. Murgatroyd said shrilly, "*Chee-chee-chee!*"

Ordinarily, when Calhoun held conversations over the general communicator phone, it meant that the Med Ship would shortly go aground and people would pet Murgatroyd and feed him sweet cakes and coffee until he almost burst. His small brain made that association again. He began to lick his whiskers and otherwise make himself tidy and irresistible.

Rob said contemptuously, "Are you fool enough to expect him to protect this ship and let you go away in it? He'll never do that! Never!"

"I don't expect him to," said Calhoun mildly. "But he really shouldn't make trips like those to Lanke. It's dangerous! There may be plague on Lanke now, because of it. I expect him to try to get the ship for his own ideas."

"But he's coming . . ."

"Yes," said Calhoun.

He turned to the vision-plates again. There were at least eight hundred men lined up beside ropes. There were shoutings and orders and cursings. Under exact instructions, the ropes tightened. Men heaved at the ends of the short logs. They rose. They stood up at an angle of forty-five degrees. More shoutings. Enormous, straining efforts. . . .

The long log, the heaviest log, the one with the cross-pieces fastened to it, stirred. The shorter logs transferred the flat drag of the ropes to a slanting downward cable, so that the long log went wavering up from the ground. Men with ropes spreading out in every direction balanced it to a sharply vertical position. It stood on end, nearly forty feet long, with cross-pieces by which it could be climbed to its very top.

Now Calhoun observed the spoke at its end. It was inches thick and six feet long. It pointed toward the Med Ship. The men with the smoking stuff were halfway across the marsh, now. They kept carefully out of the white vapor the thing they were carrying gave off.

Shoutings, making sure that everything was right.

"What . . ." That was Elna. Rob scowled, but he did not grasp the picture even yet.

The tall pole with the horizontal spike at its end wavered a little, back and forth. A bellowing voice roared. . . .

Half the men at the ropes—those that kept the spiked log from falling toward the ship—let go. The other half dragged frantically at the ropes to make it fall on the Med Ship.

It was very well handled. The log crashed into the small ship's plating. The spike went through, as no battering-ram could possibly do. Then there were men swarming up the cross-pieces. Those who'd been bringing the smoking stuff ran desperately, to arrive at the earliest possible instant. Containers of the strangling white smoke went up.

"Clever!" said Calhoun.

He sniffed. There was an uproar of triumph outside. The citizens of Delhi howled in triumph, and in their move-

ments they stirred up the swampy pools and many were nauseated.

Calhoun sniffed again, and nodded.

"Sulfur," he commented. "They're blowing sulfur smoke in the hole they punched in our hull. In theory, we'll have to open the air-lock doors to get out or strangle. And when we go out they'll come in. Clever!"

The smell of burning sulfur became distinct. It grew strong. Calhoun adjusted a control governing the barometric pressure inside the ship. If by a rise in temperature or for other reasons the pressure in the ship went up, a pump would relieve the extra pressure by compressing it into one of the large air-tanks which carried fourteen times the volume of the Med Ship. Calhoun and Murgatroyd could live for a long time on stored air if the air-renewal system failed.

Now Calhoun had raised the pressure-control. The control called for a pressure of twenty pounds to the square inch instead of fourteen point seven. The tanks poured out vast volumes of air from the reserve-tanks. The pressure inside the ship went up. The sulfur smoke being pumped in the ship turned cold. An icy blast poured out on the sweating men atop the log. The burning sulfur itself was blown about . . .

The men on the log went down. The tumult of outcries outside the Med Ship was a frenzied rage.

Calhoun restored the pressure-control to normal. Elna shivered. The air in the ship was cold.

"What—what happens now?" she asked forlornly. "If you can't lift off . . ."

"I'm waiting for the spaceboat that went to Lanke," said Calhoun. "He's going to come here. Object, to take over the Med Ship."

The ceiling G.C. speaker rasped: "*Med ship! You think you're smart, eh? Come out of that ship and leave the air-lock open or we'll kill you!*"

Calhoun said politely, "Hadn't we better talk it over? I really should get to Med Headquarters. . . ."

"*We've a cannon,*" said the harsh voice. "*If we have to use it—we can rebuild what it breaks. Come out!*"

Calhoun did not reply. Instead, he carefully inspected the dials and the switches of the control-board. Rob said savagely, "Here comes the boat! If they fire an explosive shell into us, it'll destroy us!"

"And the Med Ship too," said Calhoun encouragingly.

"Which is what you want. But they're not used to gunnery near a planet, which makes straight-line trajectories into parabolas."

He saw the lifeboat, patches on patches, dents and lumps in its hull, the very picture of makeshifts piled on each other to the point of lunacy. It landed, on what must have been a flat place on a mountain-flank. The voice came again: "*Come out, leaving the air-lock open, or we kill you!*"

Rob said as if reluctantly, "You should let Elna go out before they kill us."

Calhoun said, "I was just waiting for that ship. It really shouldn't go traveling about. Nobody should leave Delhi but me."

"But you're mired! You're stuck here! Your rockets can't lift you."

"I'm not counting on rocket-thrust," said Calhoun cheerfully. "I'm going to use steam."

He pressed a button. As had happened once before in this place, a slender blue-white flame appeared under the stern-most part of the Med Ship's hull. It was the emergency rocket, by which the ship had landed. Now the ship was held fast by mud. It would have required a pull or push of many times the Med Ship's weight to break the suction of the mud. The rockets, as rockets, could not conceivably have pushed the spacecraft clear.

But the rocket-flame bored deep down into the ground. It vaporized the water beneath it. It volatilized the ground. For eighty feet down in the valley-bottom's water-saturated soil, the flame bored its way. Steam-pressure developed. Steam-bubbles of enormous size came up. Steam broke surfaces, heaving up masses of semi-solid valley-bottom and escaping at the jagged edges of the cracks between masses. The Med Ship ceased to rest upon an adhesive mass of muck, packed over the feet at the bottom of the landing-fins. The Med Ship actually floated on a mixture of solidities and semi-solidities and steam. It wasn't using the propulsive power of its rockets, at all. It used their steam-generating capacity.

She shot upward before the spaceboat could fire a shell at her. She went up three thousand feet before Calhoun cut down on the rocket-power. Then he peered carefully, tilted the ship and let it drop. The valley-bottom seemed to leap up. The spaceboat spouted rocket-flame. Calhoun dashed

at it, seeming to intend a crashing collision in mid-air. He missed it by feet. He swooped and circled and dashed in at it again. The spaceboat dodged frantically.

"I'm doing this in atmosphere," said Calhoun, with an air of apology, "because they made a leak in the hull. I have to take care of the spaceboat. It shouldn't leave Delhi."

The spaceboat fired a cannon-shell. It went completely wild. Calhoun swept in, flipped the Med Ship end for end, and his rocket-flame would have cut the spaceboat in two had he swung one of his controls the quarter of an inch. He didn't. Instead he flung the Med Ship about until it was borne in upon the crew of the spaceboat. They had run up against a professional in spacecraft handling. He literally drove the spaceboat down and down and down—and he could have destroyed it a dozen times over—until at the last it made a panicky landing and figures leaped out of it and fled away.

Calhoun made the Med Ship hover above it, fifty feet high, with that deadly star-temperature flame of the rockets drilling through the hull, through the patches, and into the interior.

It was only when flames burst out of cracks and crevices all over the grounded freakish spacecraft that he lifted the Med Ship and headed away over the horizon.

He landed once more on Delhi, some hundreds of miles away on the single continent this planet owned. He was very tired, then. He ordered Rob and Elna out of the ship.

"Nobody should leave Delhi but me," he repeated politely. "So you get out. There'll be a hospital ship here within a week, two at the outside. Are you two going to be married?"

Rob said with dignity, "Not unless the plague is defeated and we can go where we please, not if our children would have to stay on Delhi and gradually become savages."

"I'll send you a wedding present by the hospital ship," promised Calhoun. "You did me a great favor. Thanks."

He closed the air-lock. He looked at a dial. The reserve-tanks of the Med Ship had been emptied, in blowing sulfur-smoke out of the single puncture in its hull. He had been pumping them up to normal reserve pressure again, and this was Delhi air. Anybody who got the plague had only to stay in Delhi air and he would be cured. However, there was work for the Med Service to do to arrange that he not relapse when he went out of Delhi air again, nor give the plague to anybody else. There'd be no difficulty about

that. The Med Service had solved much more difficult problems.

Calhoun sealed the hull-puncture with a quick-setting plastic. He sealed off the compartment whose wall had been pierced. He went down to the control-room. He blinked as he set the rockets to roaring again and the Med Ship climbed for the sky.

An hour later he was intolerably tired. He aimed the Med Ship for that far-off small star-cluster which was its home. With extra care, because of his weariness, he verified what he'd done. Then he said, "Overdrive coming, Murgatroyd. Five-four-three-two-one."

There was a revolting dizziness and an appalling nausea and then the feeling of a spinning drop to nowhere. Then the Med Ship was in overdrive. It felt solid as a rock. There was no sound but the background tape producing almost inaudible noises of traffic, and rain, and surf, and music, and human voices. There was even faint laughter.

Calhoun yawned.

"Murgatroyd?"

"*Chee-chee!*" said Murgatroyd shrilly. "*Chee?*"

"Take over the ship," commanded Calhoun. "If any emergencies turn up, you take care of them. I'm going to bed!" And he did.

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