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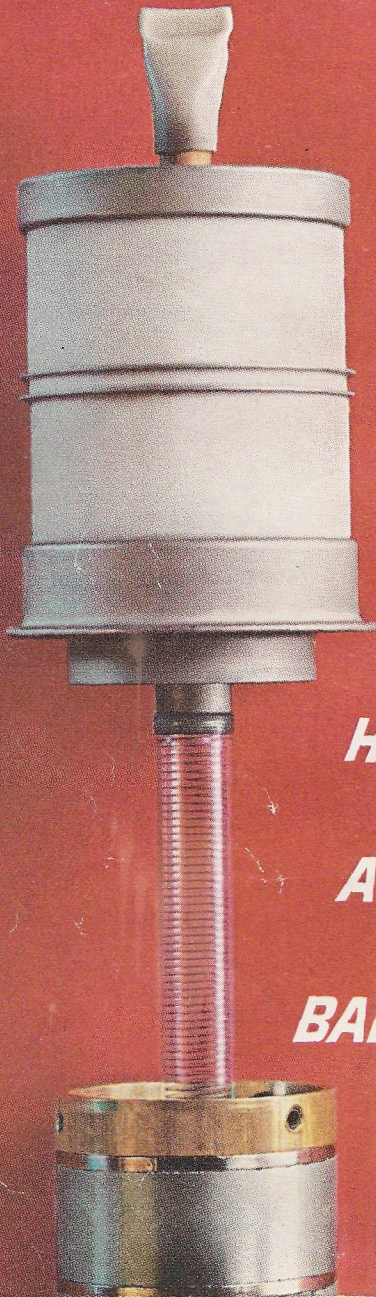
# analog

SCIENCE FACT  $\leftrightarrow$  SCIENCE FICTION

**A CASE OF IDENTITY** by **RANDALL GARRETT**

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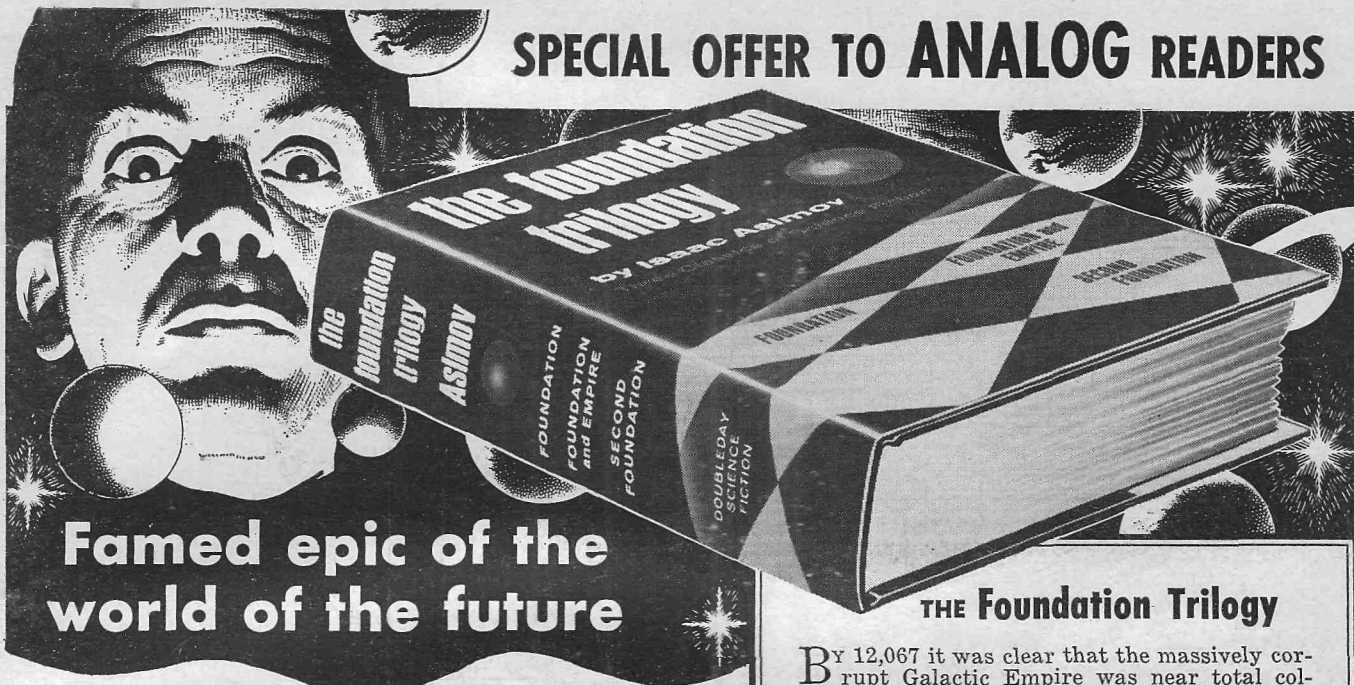
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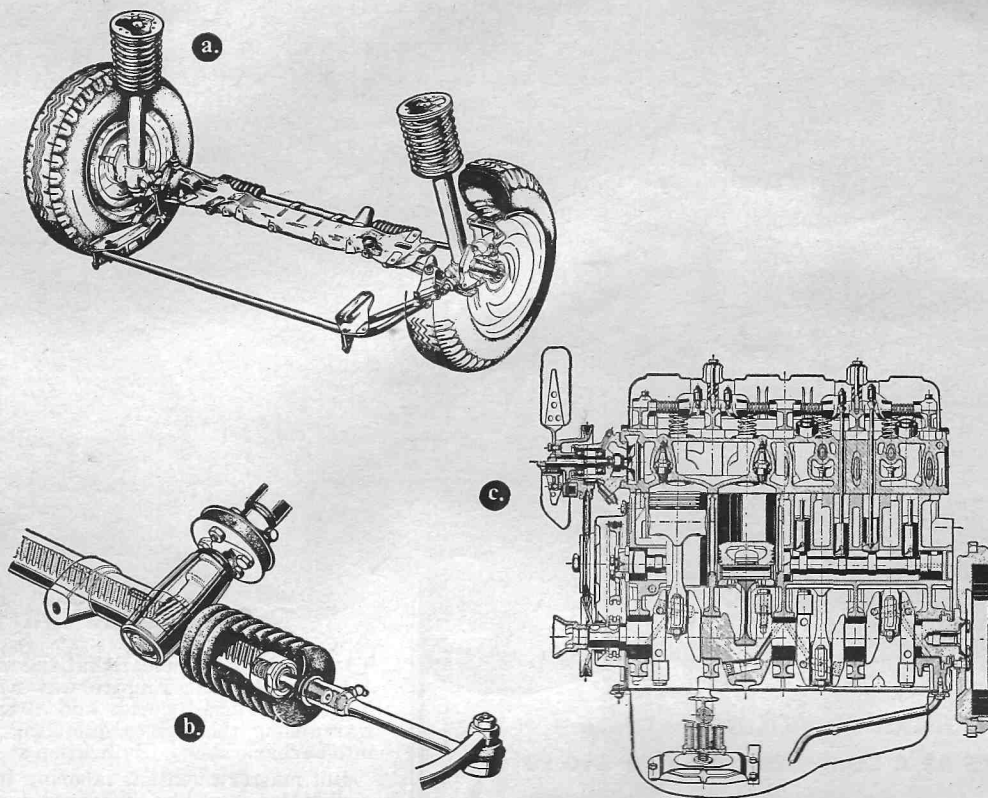
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**(b) Steering, all 404 models:** Peugeot employs the highly efficient rack-and-pinion type steering gear. Similar to that used in racing cars, this steering system eliminates "play," and gives the driver remarkable control under all driving conditions. The Peugeot turns in only 31'2",

a far smaller turning circle than most of today's smaller cars.

**(c) Engine, all 404 models:** Peugeot has a five-bearing crankshaft for even greater performance and durability. The engine is slant-mounted 45° to the right. This configuration means that the hood-line can be low, there is ample room to place induction and exhaust manifolding where it belongs—rather than where it fits—and that all components requiring service can be mounted for easy access with the bulk, not the weight, of the engine off-center. The Peugeot's light engine is designed for good torque and power characteristics without sacrificing longevity. Cylinders are wet sleeved which permits the use of hard, low-friction material for cylinder walls in conjunction with a softer, castable metal for the block.

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# analog

SCIENCE FACT  SCIENCE FICTION

## SCIENCE FACT

THE RISK-TAKERS  
Carolyn Meyer ..... 10

## NOVELETTE

A CASE OF IDENTITY  
Randall Garrett ..... 17

## SHORT STORIES

THE MACHMEN  
James H. Schmitz ..... 43

SHEOL  
Piers Anthony and H. James Hotaling ..... 50

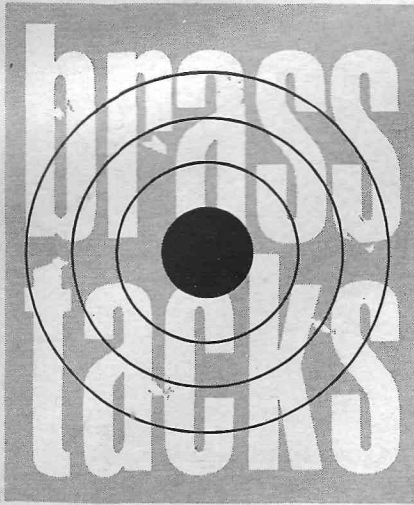
## SERIAL

SLEEPING PLANET (Conclusion)  
William R. Burkett, Jr. .... 56

## READERS' DEPARTMENTS

Brass Tacks ..... 4  
The Editor's Page ..... 7  
In Times to Come ..... 49  
The Reference Library  
P. Schuyler Miller ..... 86  
The Analytical Laboratory ..... 90

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COVER BY JOHN SCHOENHERR



Dear John,

Herewith, "A Case of Identity." Lord Darcy and Master Sean ride again.

As you will see, I have carried the chronology of Lord Darcy's world one step further. In our own history, Henry of Anjou, in the right of his mother Matilda, who was the daughter of Henry I of England, became the first Plantagenet King of England under the title of Henry II. His father was Count Geoffrey of Anjou. He married Eleanor, Duchess of Aquitaine, thereby bringing Aquitaine under English rule. Besides being King of England, he was Duke of Normandy, Duke of Aquitaine, Duke of Brittany, and Count of Anjou, Maine, and Touraine. He ruled all of England and more than half of France.

He had four sons: Henry (known as the Young King), Richard (the Lion-Hearted), Geoffrey, and John (of Magna Carta fame).

Old Henry II died in 1189. He was predeceased by Young Henry (1183) and Geoffrey (1186), so the crown went to Richard.

When Richard died at the Siege of Chaluz, in France, the crown should have gone to Geoffrey under the law of primogeniture. But that law wasn't a law yet. It may have been a hypothesis or even a theory, but it wasn't a law. Besides, Geoffrey had been dead for thirteen years, leaving behind him a new-born son, Arthur. Geoffrey had been made Duke of Brittany, and, upon the death of Rich-

ard, the crown should have gone to the thirteen-year-old Arthur, now Duke of Brittany.

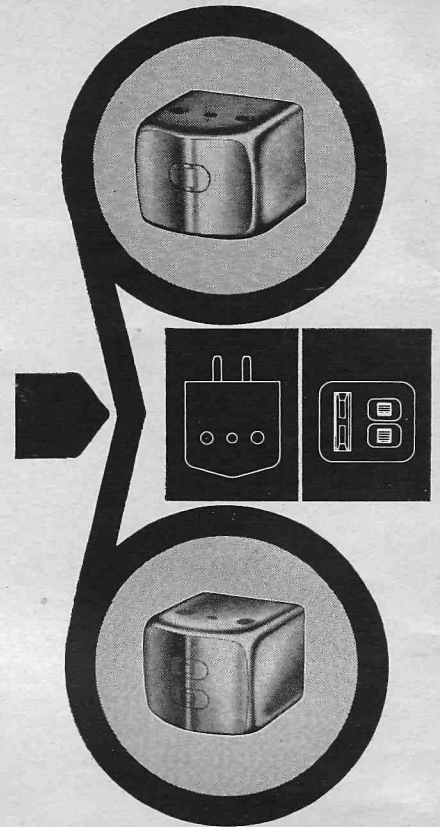
As Richard lay dying, he named his younger brother John as his heir. But, according to Duggan, "He had changed his mind so often that this carried little weight; had he lived another week he might have left all to Arthur."

The English barons did not want a child on the throne, so they declared for John. Normandy followed suit. Even Sir William Marshal, probably the closest to a true story-book knight of any who ever lived, said that even a bad king was better than a council of regency.

But the theory of primogeniture had been invented—or re-invented—by the Capets, the ruling house of France, and it was much more strongly imbedded in France than in England. Anjou, Maine, and Touraine went over to Arthur. Since he was Duke of Brittany, Brittany naturally backed him.

Old Queen Eleanor, meanwhile, now seventy-seven, had become Duchess of Aquitaine again. (Henry II had been Duke of Aquitaine; then it had gone to Richard. But only because the first was the husband and the second the son of the Duchess.) Eleanor was a tough-minded old biddy who was never one to forget a slight. She had wanted Geoffrey's son to be named Henry and she flew into a rage when she found that Geoffrey's wife, Constance, had, without even consulting Eleanor, given the boy the un-Norman name of Arthur. (The Arthurian romances were just coming into popularity at that time, and Lady Constance was somewhat of a romantic.) As a result, Eleanor of Aquitaine much preferred her son John to her grandson Arthur. Aquitaine, which included the Counties of Poitou and Gascony, became John's territory.

Naturally, the only way to settle the thing was to get all the armed knights into the field and battle it out. Duke Arthur didn't have a chance. He had Normandy to the north of him, Aqu-



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taine to the south, and England across the Channel to the west. Plus the fact that Philip of France was taking advantage of the civil war by sneaking in from the east. Then, too, the people of Brittany hated anything French, so they couldn't co-operate with Anjou, Maine, and Touraine.

The upshot of it all was that, after three years of fighting, John captured Arthur. He disappeared into the castle at Rouen and was never seen again. Historians agree that he was murdered by order of King John. He was about sixteen.

Now, if Richard had lived another twenty years, Arthur would have been in a much better position. Richard never really liked John, and if Arthur had stuck with Richard, John would never have had a chance. Of course, we don't know what kind of man Arthur would have been if the neighbors had let him grow up, but I can make the assumption, for that very reason, that he would have been both a good Plantagenet and a good King. If so, the history of the Angevin Empire would have been vastly different.

RANDALL GARRETT

Dear Mr. Campbell:

I regret having to use the dateline April 1, 1964 but it's quite appropriate for the article, "The Extinction of Species," by one Bert Kempers.

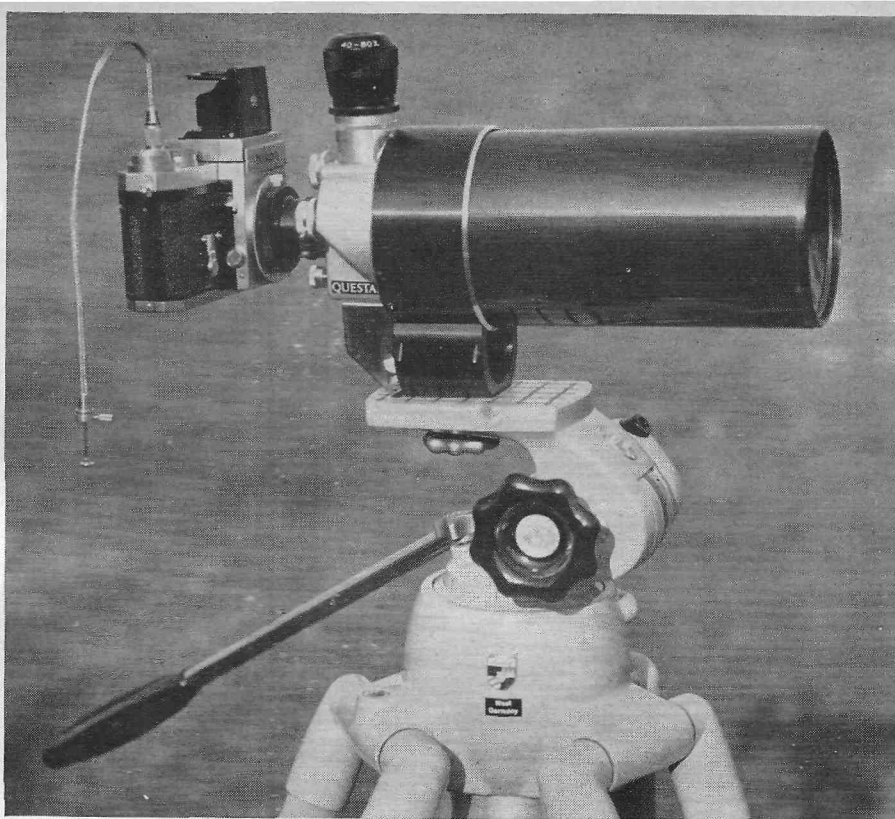
Mr. Kempers has attempted a most laudable feat, that of demonstrating how Man has decimated the planet's wildlife and destroyed large parts of humanity's common heritage, the natural fauna of the world.

Sadly, he has made so many errors, both in substance and by implication, as to render almost valueless what actually is correct in his writing. Nor is his English an aid to further understanding.

Let me begin with his errors in pure fact. He states the following, to instance some of his remarkable views.

- a) That Man has aided in the extermination of the following animals: *Nothrotherium* (a ground

*continued on page 91*



This is the New Field Model Questar Telescope.

It weighs less than 3 pounds and costs only \$795. Included in the price are this 4-lb. case, one eyepiece, and an improved basic camera coupling set. There is room for cameras and other accessories.

Twenty-one major changes in this barrel and control-box assembly permit a much wider photographic field of view, which now covers all but the very corners of the 24x36 mm. film frame at f/16 without extension tubes. Exposures are two f-numbers faster.

The New Field Model is optically identical in quality to all Questars. Since only an average of one out of three perfect optical systems surpasses theory by enough to satisfy us, we can continue to state that no amount of money, time or human effort can noticeably improve Questar's power of resolution. For whereas Lord Rayleigh's criteria sets 1.4 seconds of arc as Questar's limit of resolution, a Questar has resolved two stars but 0.6 second apart.

Because our function is to make the world's finest small telescopes in limited number, instead of many of ordinary quality, this New Field Model offers a new experience to the photographer. We offer him the world's sharpest lens, of 89-mm. aperture. We provide him with a low-power wide-field finder view, like that of a field glass, to let him locate distant objects rapidly. With flick of finger he can bring to bear a high-power view of 40-80x or 80-160x to study the object minutely through this super-fine telescope. Another finger flick and slight refocusing brings the object to the clear bright center of his cameras' groundglass.

At this point he is challenged to capture on the sensitive emulsion what this superb telescope of 56 inches focal length is projecting to his film. He has seen it in Questar's eyepiece and in his reflex camera's groundglass. All that remains is to place the image in exact focus on the film and expose correctly with no vibration at all. And at long last we have the only camera able to do this, the Questar-modified Nikon F.

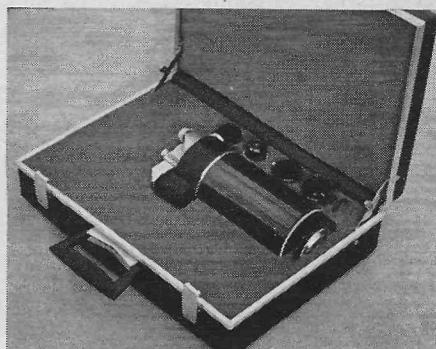
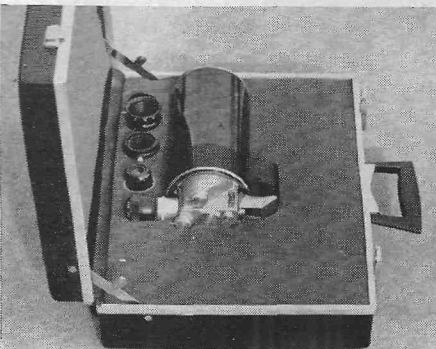
For the first time, then, Questar has a true photographic model, and a camera without mirror slap, shutter vibration, or too-dim focusing. Moreover, from now on we can measure the actual picture-taking light at the groundglass, and abandon inexact exposure calculations entirely, using the new cadmium sulfide meters.

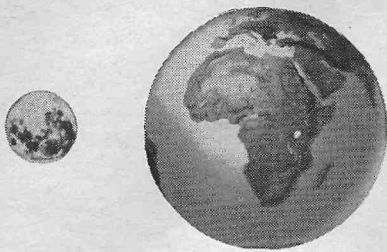
With this new control of vibration, sharp focus, and correct exposure times, only one other factor remains to interfere with high resolution telescopic photography. We need quiet air for good seeing—which is no problem at 7 to 100 feet. But how can we get trembling air to stand still while we take sharp pictures at great distances? There are several things we can do to take advantage of nature's moods, and if you write for literature we will tell you more about it.

New Field Model, \$795 in case with basic couplings as shown. The 80-160X eyepiece, \$35. Questar-modified Nikon F bodies, from \$234.60. Complete outfit shown, with camera and tripod, \$1332, postpaid in U.S.

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## NEW HOPE FOR UNDER-DEVELOPED NATIONS RESULTING FROM BASIC SPACE RESEARCH

Lunar and space missions such as Project Apollo seldom seem, in their far-out glamour role, to be closely related to that great fundamental...mankind. Yet one single aspect of the Apollo program—fuel cells—holds a vast amount of hope. Especially for under-developed nations.

Often referred to as "continuous batteries," fuel cells convert chemical energy directly to electrical. They are the newest power sources to emerge from scientific research into the realm of practical engines. The specific cell system aboard Apollo will be a Hydrox® unit, reacting hydrogen and oxygen, and is the result of research at Leesona Moos Laboratories, one of the first in America to undertake studies on fuel cells. Hydrox will supply electrical power for vehicle control, communications, and numerous other power needs aboard this lunar mission. Marking the first such use of these new power sources, the Hydrox installation will inaugurate a new age in the generation of electrical power. Final engineering and manufacture of the units for Project Apollo will be carried out by Pratt & Whitney Division of United Aircraft, under license from Leesona Corporation.

But space missions are only the first part of the story. At the same point in time that Leesona Moos began studies of Hydrox fuel cells, a concomitant project was undertaken to develop an even more advanced system...a cell using air as oxidant and inexpensive hydrocarbons

or their derivatives as fuels. These hydrocarbon-air (Carbox®) and mixed-gas/air (Aminox™) developments of Leesona Moos do not require reactants of high purity, and are very flexible from a logistics point of view. Low cost and readily available fuels are used, and the universal oxidizer—air—supplies the other portion of the reaction mix. Because the fuel cell is an extremely efficient engine—efficiencies of up to 70% are attainable, vs. 30% for a conventional diesel—the result is an exciting new means of generating electrical power at low operating expenditure. Pratt & Whitney Aircraft in the United States, and Energy Conversion Ltd.,\* of England, are carrying out further developmental engineering on these systems under license from the Leesona Corporation.

These new Leesona power sources, of high efficiency and low fuel costs, can readily be seen to provide the world with an entirely new type of electric generator. Fuels of the hydrocarbon variety are fairly abundant throughout the world. The fuel cell, though scientifically sophisticated, is neither unwieldy nor complex in its operation, and requires little maintenance. Units with power levels from those required for a one-family dwelling up to communal or industrial ground-power stations have been projected in Leesona Moos studies, and found feasible.

The impact Carbox and Aminox can have on the emerging countries is

readily understandable. The development of a nation can almost be measured by its ability to produce and consume electrical power. In this mechanized world, virtually all industry waits on the availability of electricity. If an emergent economy must hold off its development until completion of large-scale hydroelectric projects, a distinct problem of time and expenditures arises. If, on the other hand, the nation had access to Carbox and Aminox type fuel cell systems, which could be tailored to the need and would operate on locally available fuels, the basic first step toward an industrialized economy and higher living standards would be achieved.

Leesona believes its efforts, plus the great additive capabilities of our United States and international partners, will soon result in working installations of the Carbox and Aminox systems to advance the standards of all mankind. Meanwhile, the sibling Hydrox system supplies power for a moon voyage. And research continues.

---

*\*Energy Conversion, Ltd., is a new corporation founded by four British companies: National Research and Development Corporation; British Petroleum Company, Ltd.; British Ropes, Ltd., leading manufacturer of rope and steel cable; and Guest, Keen, and Nettelfolds Group, major steel manufacturers.*



### LEESONA MOOS LABORATORIES

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## *A counterblaste to Tobacco.*

which is holden of the wholesomnesse thereof, as the venime of putrifaction is contrary to the vertue Preseruatue.

Moreover, which is a great iniquitie, and against all humanitie, the husband shall not bee ashamed, to reduce thereby his delicate, wholesome, and cleane complexioned wife, to that extremitie, that either shee must also corrupt her sweete breath therewith, or else resolute to liue in a perpetuall stinking torment.

Haue you not reason then to bee ashamed, and to forbear this filthie noueltie, so basely grounded, so foolishly receiued, and so grossely mistaken in the right vse thereof? In your abuse thereof sinning against God, harming your selues both in persons and goods, and raking also thereby the markes and notes of vanitie vpon you: by the custome thereof making your selues to be wondered at by all forraine ciuil Nations, and by all strangers that come among you, to be scorned and contemned. A custome lothsome to the eye, hatefull to the Nose, harmefull to the braine, daungerous to the Lungs, and in the blacke stinking fume thereof, neereft resembling the horrible Stigian smoke of the pit that is bottomelesse.



*This pamphlet, published in 1604, indicates that the damnation of tobacco did not, by any means, start with the Twentieth Century.*

*It is the property of Mr. Robin Howard, of the Gore Hotel, Queensgate, London, with whose permission we publish this photocopy. It is on display as part of the Shakespearean Exhibition of Elizabethan manners, customs, and memorabilia at the Gore Hotel this summer.*

### EDITORIAL BY JOHN W. CAMPBELL

It is widely accepted as a fact that the human race is stupid, foolish, and self-destructive in its folly.

This widely accepted "fact" might, just possibly, be mistaken. A species that has succeeded in remaining alive for some three billion consecutive

years, despite considerable pressure from other inhabitants of this planet, cannot be entirely without sound sense.

Man's intellect, on the other hand, is a late comer, and widely given to stupidity, folly, self-assertive arrogance, and a conviction that its decisions are, if not directly inspired by God Himself, at least inspired by that

## A COUNTERBLASTE TO TOBACCO

self-worshipping demigod, Man's Mind.

Man's intellect hasn't been around long; there are some indications that if it isn't broken of its dangerous habit of self-assertive arrogance, it won't be around much longer, either.

One of the latest interesting examples of the arrogance of intellect seems to me to be the business of smoking and health. It's got quite a history, of course; we haven't time or space to review the comments made on smoking and health back in the early 1500s, when smoking was first introduced into the Old World. The diatribes on the subject then were, of course, original; nobody in the Old World had had any opportunity to complain about people smoking before that time. They were more pointed—if less printable—than the ones being issued currently, and they had, I think, far more justification.

As of 1592, say, the available data on the subject of the prolonged effects of smoking tobacco were not very extensive—and there was certainly adequate and ancient data to the effect that smoke was highly undesirable and injurious to human beings. Men had been doing everything they could, applying great ingenuity over the course of scores of millennia in an effort to maintain the benefits of Fire, while eliminating the noxious odors and effects of Smoke. For men to deliberately reverse this ages-long trend, and spend time, effort, and money raising and processing a weed for the specific purpose of getting smoke into themselves, after all the ages spent developing smoke-eliminating devices . . . surely that was obviously insanity!

Of course, they did, also, chew and snuff it. (Snuff was to "clear the head" in the days before TV commercials were available to tell people about various nasal sprays, pills, ant preparations.)

In the modern discussions of smoking and health, the current position taken by official government medical agencies is that smoking induces lung

cancer and other debilitating and ultimately lethal diseases.

About fifty years ago, a prominent doctor announced to the world that he had found, by study of statistical evidence, that smoking caused blindness.

About forty years ago, Thomas Edison, Henry Ford and Harvey Firestone were united in a campaign to turn people away from cigarettes—they helped popularize the term "coffin nails" for them. This trio announced that the cause of the danger of cigarettes was the breakdown products formed from the paper in which the tobacco was wrapped. (They smoked cigars.)

A Scottish doctor—it isn't reported whether he is a smoker or not—in a speech before a British Medical Society meeting recently, in discussing the current cancer-cigarettes correlation, pointed out that in the last fifty years, cancer has been shown to be correlated with being gassed in WWI, eating fish, exposure to sun and wind, not eating fish, smoking cigarettes, and the hairiness of the second phalanxes of the fingers and toes.

It's remarkable the amount of emotional heat that seems engendered by this question of smoking. There are so many perfectly obvious, sound reasons for not smoking that it is peculiar that so much emphasis is put on the esoteric ones like a barely determinable possible correlation between cigarette smoking and cancer. For instance, tobacco is expensive—cigarettes more so than pipe tobacco, chewing tobacco, or snuff. (Housewives and plant maintenance people are delighted at the shift from chewing tobacco to cigarettes, of course.) Smoking has led to unknown numbers of fires, automobile accidents, and accidents of other kinds due to momentary inattention of a controlling operator. It's caused explosions in powder mills, mining areas and gasoline refineries—even in flour mills and granaries.

It produces a marked odor on the

breath, and makes the mouth thick and furry, the throat raw and the eyes red—as does exposure to any form of vegetable-matter smoke.

There's lots of obvious reasons why men shouldn't smoke.

Only . . . for the three and a half centuries since tobacco became available in the Old World, its use has increased, and an immense economic investment in the industry has built up.

When the smoking-causes-cancer publicity came out at the beginning of 1964, the tobacco companies didn't say much of anything except a very soft and meaningless "We are studying the matter."

They'd had some experience with the subject. The rate of cigarette consumption, in terms of cigarettes per capita-over-fifteen-years-of-age increased steadily from about WWI to the early 1950s. Most statistical charts don't quite show that particular point . . . but you can get the figures. Along around 1952 the consumption per capita leveled off, and began to decline. Then in 1954 came the first great blast of cigarettes-cause-lung-cancer publicity.

Cigarettes showed a prompt drop in consumption . . . and after that prompt response, started resuming their interrupted increase in per capita consumption.

The tobacco companies had reason to be quite quiet in their response to the 1964 publicity. The last time all that hullabaloo went off, the net effect had been a resumption of increasing consumption.

So . . . we've heard, for the last four hundred years or so, why people should *not* use tobacco in any form, and for the last half-century in particular, we've been told *most* authoritatively why cigarettes shouldn't be consumed.

The only voice on the other side of the subject has been the slightly hang-dog, sheepish reply of the smoker . . .

"Well . . . I like it."

Tobacco companies are, of course, forbidden to say anything in their defense, or in defense of their product. When the Ethical Authorities have reached an Intellectual and Logical Decision, any voices raised in opposition are obviously speaking for selfish self-interest, Evil, and conscienceless profit motive. (Those are the currently acceptable terms of damnation; a few centuries ago "heretic" and "anti-Christ" would have gotten in there somehow. The modern damnation of opposition is somewhat handicapped by the necessity of avoiding the possibility of making it look as though they were anti-capitalism and free-enterprise, of course.)

I'd like to point out that the medical profession has failed one hundred per cent completely in doing its proper duty in respect to this problem. They've expended immense time, effort and money *on one side of the issue only!* They have invested *no* effort in determining why men accepted tobacco in the first place, and why they have maintained that acceptance in the face of a hundred perfectly valid, objective reasons for pitching the whole tobacco business out the window.

The only answer the medical people have come up with is "It's habit-forming, of course! Obviously that's why foolish people insist on continuing that destructive habit!"

The only explanation the medical people are offering, in other words, is that "it's a habit."

"Doctor—your explanation is not good enough! You have not done a satisfactory job of looking into an extremely important matter from *both* sides, and I cannot, therefore, trust your one-sided report!" is the only proper response to the present indefensible position of the medical fraternity, and in particular, the medical-governmental agencies which have been more responsible for this cancer-cigarettes business than the general practitioners.

Look—smoking *was not a habit* when the New World was first discovered. It was *not* a habit anywhere but among the Indians of America.

Yet in little more than a century the subsistence-level—if they even managed subsistence!—peasants of Tibet were smoking tobacco. Once tobacco became available, it spread throughout the world in a manner unmatched by any other commodity in the world's history!

That's because "it's a habit" huh? Because the world's population, which had been trying for the last one hundred thousand years minimum to get out of the smoke of their cooking fires, suddenly *already-had* a "habit" that made them buy the alien, expensive import? Learn to grow a weed that they'd never known before? That's "just a habit," is it?

*Why* did a world population suddenly take up a form of behavior that was utterly alien, and a complete reversal of ages of conditioned behavior? Why did men who had never smoked anything—they'd been smoked, but not voluntarily—suddenly take up a most improbable sort of practice? Why did peoples on the ragged edge of starvation give up arable land and their labor to produce something that was so completely anti-traditional? Ye gods, modern agricultural experts, with professional propagandist-psychologist backing, have tried and tried to get various subsistence-level peoples to accept a new agricultural product—and failed! Central African natives who are dying of malnutrition due to protein starvation won't raise soya beans—which would save the lives of their babies, and give them sound health—because that's not traditional.

Yet these peasants, all over the world, suddenly adopted the weird habit of deliberately breathing in the smoke of a smoldering fire, carefully hoarded in a tiny fire pot on the end of a tube. And devoted the land they

needed desperately for food to a completely nontraditional and inedible product!

Not just in America—where it had been known for *n* centuries—in Siberia, Tibet, India, Africa. Curiously, the tobacco plant is native only to the Americas, and Australia, both areas which became accessible to the rest of the world at about the same time. The particular type of *nicotina* cultivated in the United States is *not* native to North America, but to South America; the North American species is cultivated extensively in the U.S.S.R.

Now among the products that became available when the New World was opened to trade were *maté*, cocaine, *canabis americana* or marijuana, cocoa, rubber, potatoes, maize, jimson weed (which is a powerful hallucinogenic), chocolate, quinine, curare, *cube* or rotenone, and a few thousand other things.

The medical profession holds that the human race is stupid, foolish, and self-dissipative—that human beings indulge themselves senselessly, and eagerly adopt any dangerous and habit-forming drug like tobacco.

So why did the human race select from that wealth of new products, for world-wide massive consumption, only cocoa, rubber, potatoes, chocolate and quinine? And, of course, tobacco.

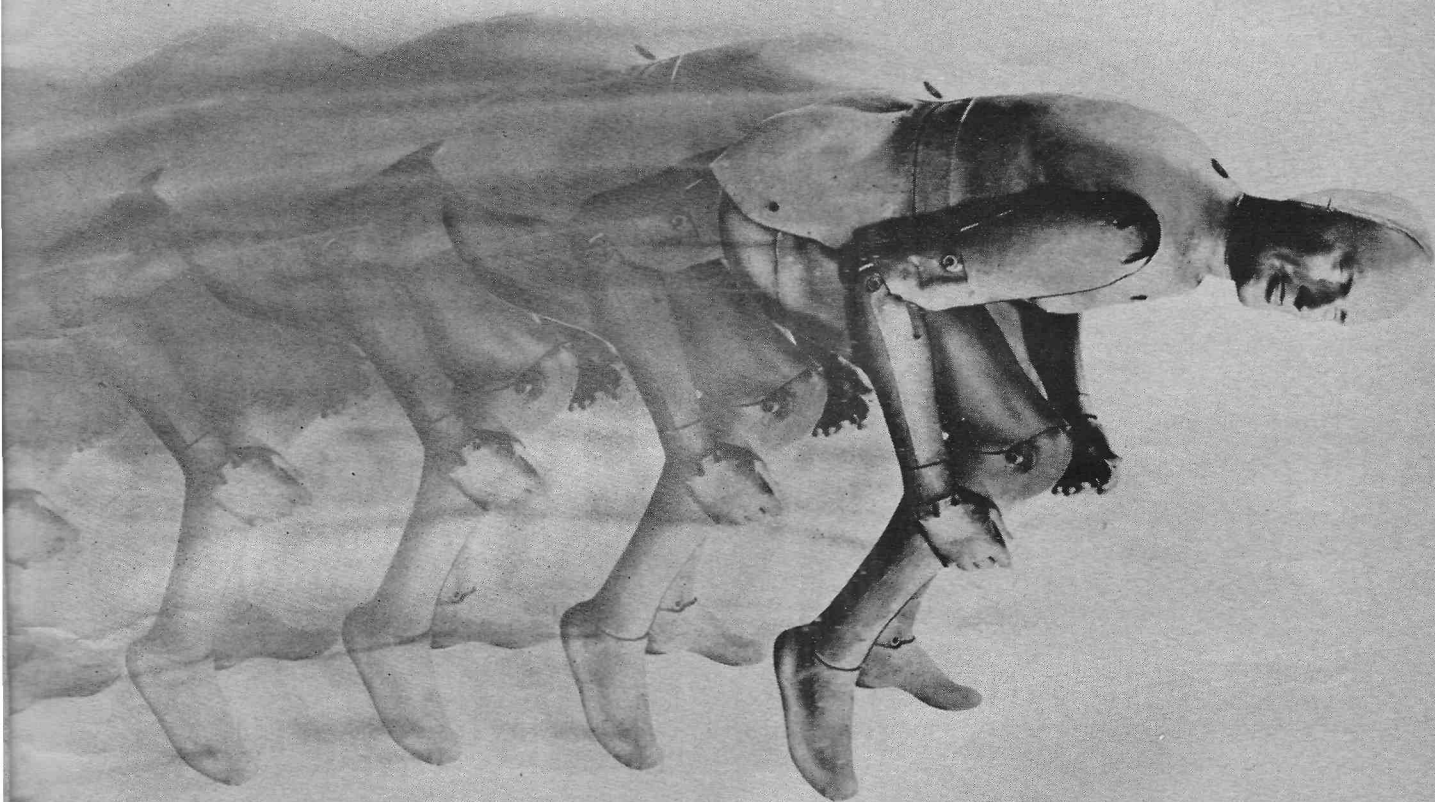
Why not cocaine? That's a euphoric, pain-easing, worry-soothing pacifier. It makes people feel happy, strong, and successful. Why didn't that go over? Every medical man knows stupid human beings eagerly accept destructive habit-forming drugs . . .

Jimson weed; now there's a cheap, very easily raised and processed high-power hallucinogen. Much simpler than LSD or those sacred mushrooms. How come that wasn't immediately spread across the world?

Then marijuana. Of course, that had its Old World counterpart, *canabis indica*, or hashish; that didn't

*continued on page 95*





## ***the risk takers***

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*When they try out one of those new, hot-shot life-saving safety-contraptions...who takes the first ride-in-the-wreck?*

*Why...“Sufferin’ Sam,” of course!*

*Unlike most heroes, he has endless lives to give for his country.*

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**CAROLYN MEYER**

Sometime in the unspecified future, at a date that may never be disclosed, the first of a series of test capsules will be hurled deep into space, carrying with it an anonymous astronaut. Very little will ever be known about him, for he and others like him are to be willfully sacrificed in the effort to satisfy man's curiosity about his universe.

There is no need to write an indignant letter to your editor, however. Those expendable astronauts are actually analogs—highly sophisticated anthropomorphic manikins. The notion of substituting a durable lifeless

object for a more fragile human is not new; nearly everyone has watched dummies go over the cliff in a Hollywood thriller. The advanced level of manikin performance is new. The dummy which "mans" the exploring capsule will be designed to duplicate human characteristics of motion and tolerance and will be wired from head to toe with instruments to record every possible stress to which a human astronaut would be subjected.

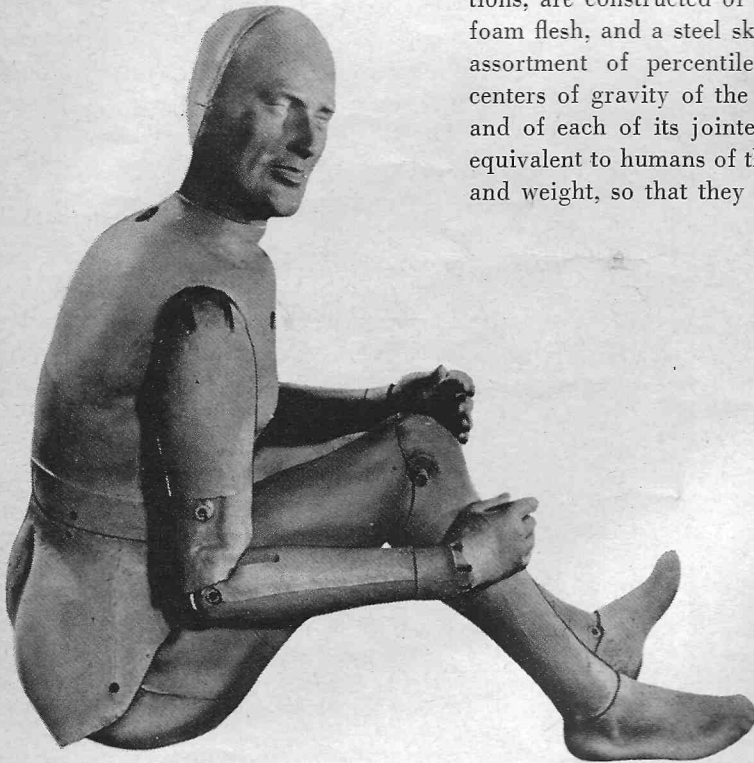
The unknown astronauts will have plenty of ancestral background in saving lives by substituting for humans in dangerous situations. Present-day manikins developed by Alderson Research Laboratories, Inc., of New York, specialists in human simulations, are constructed of plastic skin, foam flesh, and a steel skeleton in an assortment of percentile sizes. The centers of gravity of the whole body and of each of its jointed limbs are equivalent to humans of the same size and weight, so that they move at the

same rate and in the same direction as their human counterparts.

Innumerable manikins of this type have been carried aloft in Project Mercury space capsules and in X-15 experimental rocket planes. They have flattened their skulls against automobile windshields in the development of seat belts. Dozens of others were hurled from jet planes to test ejection seats and escape capsules. Some have spent days under water testing frogmen's gear; others have been subjected to all manner of explosions, plane crashes, wind-tunnel studies, and other harrowing experiments.

The Neanderthal of the species was the parachute dummy, a rugged two-hundred-pound torso designed to fit a parachute harness and internally instrumented to record the shock of chute opening, speed of descent, and other factors.

The rocket-sled series, next on the evolutionary scale, added articulated arms and legs. In a group of tests con-



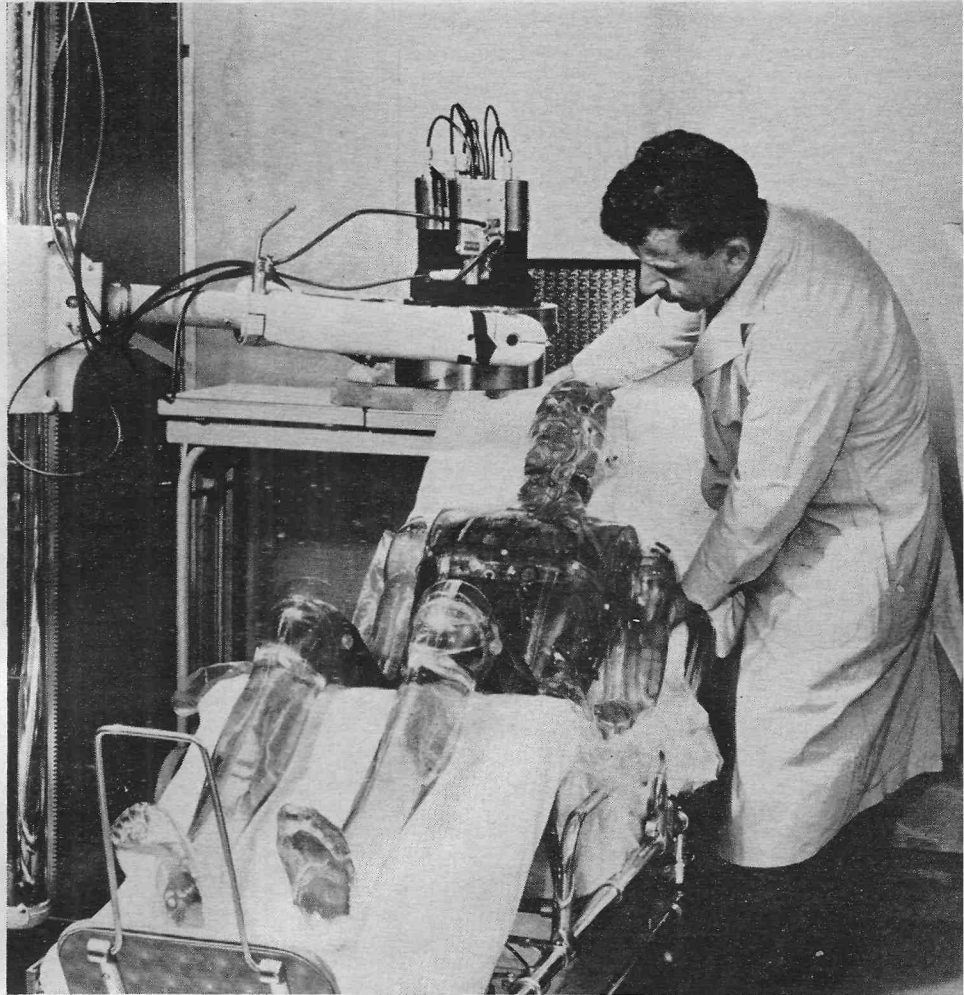
1. The articulated manikin used in automobile crash research, escape-systems testing, and other hazardous experiments is a forerunner of a future dummy space-explorer. All the major human motions are simulated, and the vinyl skin bonded to foam flesh approximates the compression, buckling, and displacement of human flesh. The instrument package carried in the torso is accessible through a chest opening.

Courtesy of Alderson Research Laboratories, Inc.



ducted on a Utah mesa, the sled—a wingless, tailless, rocket-powered fuselage—was fired down a sort of railroad track toward the mesa edge. When the sled reached near-sonic speeds, the canopy blew off and the ejection seat, carrying a test dummy, was blasted into the air. At this point in earlier tests the dummy had hurtled clear of the sled, its chute had opened, and it had drifted safely down. But in one test something went wrong; the “pilot’s” parachute flared prematurely, and the dummy was dismembered.

Aside from their practical and humanitarian value, manikins are more reliable test subjects than humans; not only do they live to tell the tale, but they tell it more completely and accurately. Refinements of the manikin—a “functional” hand which can duplicate various degrees of grasping strength and a “hi-fi” neck which measures stress on the human neck in a range of fore-and-aft, side-to-side, and rotational motions are examples



3. Ready for the count, the calibration version of a radiation-equivalent manikin reclines in an iron room while the technician adjusts for a liver scan. The calibration manikin does not contain a skeleton; its organs are filled with a solution which emits a pattern of radioactivity.

Photo courtesy of Los Alamos Scientific Laboratory, Los Alamos, New Mexico

2. (left) Preparing to take a ride in an early aircraft ejection seat, an anthropomorphic test subject holds on to a face-curtain with “functional hands.” The hands are set to snap open and release the curtain when a particular grasping strength is exceeded. In actual in-flight tests, this manikin also shows the patterns of arm-flailing that result when the hands are unable to retain their hold.

Photo courtesy of Svenska Aeroplan Aktiebolaget, Sweden

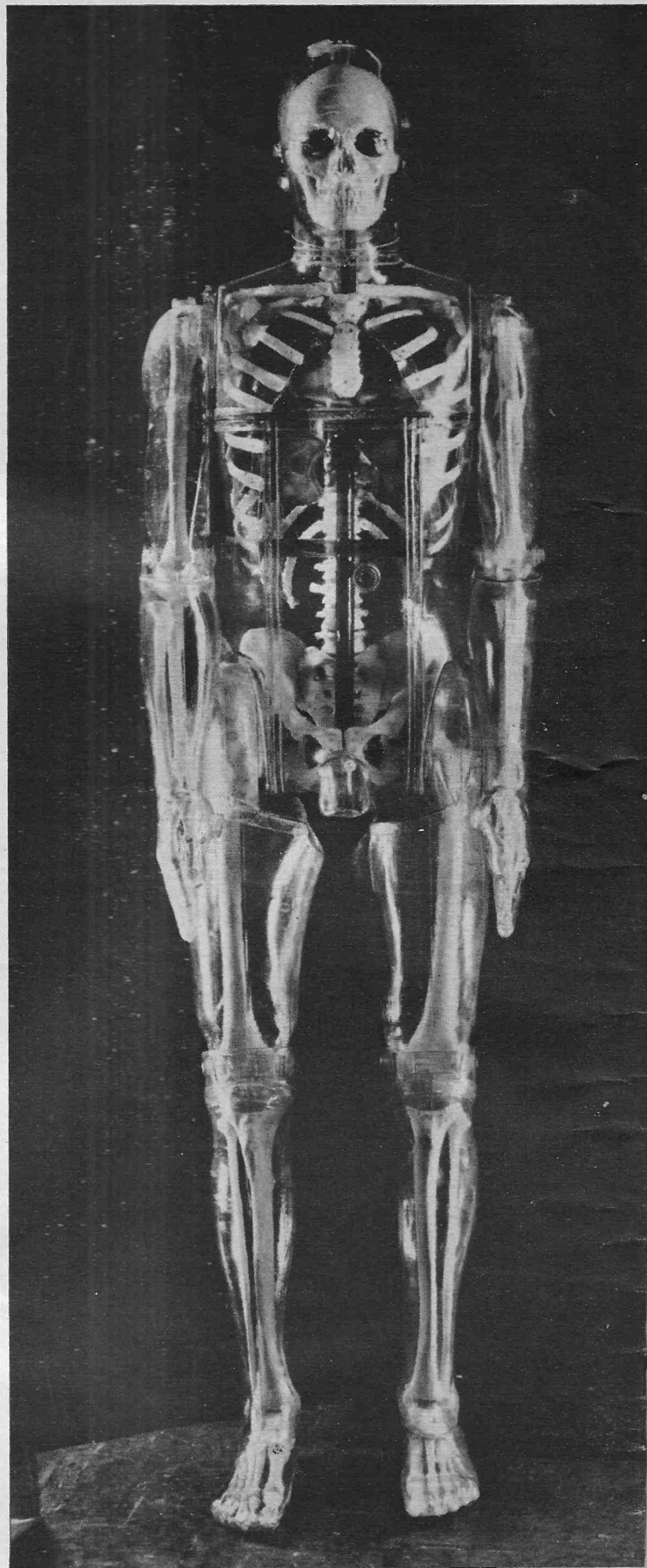
—and instruments installed in or attached to the manikin, such as accelerometers, rate gyros, pressure transducers, strain gauges, and the like, enable researchers to reconstruct just “what happened out there.”

While test dummies are invaluable research tools for determining skeletal and muscular stresses to which a human being would be subjected under matching circumstances, another family of analogs was bred for more subtle purposes: radiation studies. One type of radiation-equivalent phantom—as a medical analog is known—is used to measure the radiation a man would absorb in a similarly radioactive environment. Another, designed to emit radiation as a man would whose organs carry a radioactive burden—such as radioactive iodine, used to check thyroid function—serves as a calibrator.

Both phantoms are close to the size and shape of an average man—five feet nine inches tall, weighing one hundred sixty-two pounds—and they are radiation-equivalent: that is, radiation passes unaffected through their clear plastic shells and into a solution which duplicates the radiation-interaction characteristics of human flesh and blood. From this point, their construction and functions differ.

The radiation-equivalent phantom for absorption, trademarked REMAB, contains a real human skeleton with bores through the spinal column and in the long bones of the arms and legs through which dose-measuring devices are inserted. One of the most dramatic uses of the absorption manikin is in re-creation of accidents, such as the one which occurred in Yugoslavia several years ago, exposing a number of eminent scientists to intense radiation.

Victims of such an accident present a grave treatment problem unless the amount and distribution of the absorbed dosage can be determined fairly accurately. At one time it was necessary to perform a bone marrow graft—a difficult, painful, and inaccurate method of diagnosis. With the development of REMAB it became





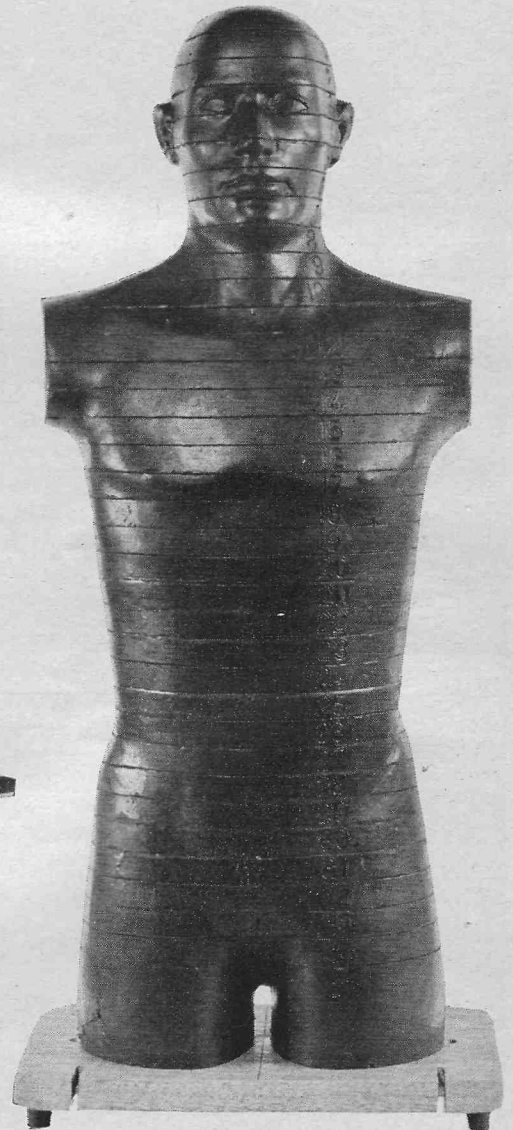
## The Risk Takers

4. (left) A radiation-equivalent manikin specialized for absorption studies contains a natural human skeleton suspended within a radiolucent shell which can be filled with solution approximating human soft tissue. Instruments inserted in the bones record the amount of radiation absorbed under various conditions, such as the re-creation of a nuclear accident.

5. (below) The organ-scanning phantom contains the liver, kidneys, stomach, spleen, and pancreas, all constructed of butyrate plastic which allows radiation rays to pass through it unaffected. The liver—large organ to the left—and the spleen next to it contain plastic tumors. Body and organs are filled with tissue-equivalent or radioisotope solutions for tests.

6. (right) A phantom to monitor radiotherapy treatments for cancer patients includes real human bones embedded in a plastic material simulating human soft tissue—muscle, fluids, and fat—with foam lungs and molded-in air spaces. Sections of the horizontally-sliced phantom are loaded with film or ion chambers, the prescribed treatment is administered to the patient-substitute, and the results are analyzed to determine the accuracy of the intended treatment.

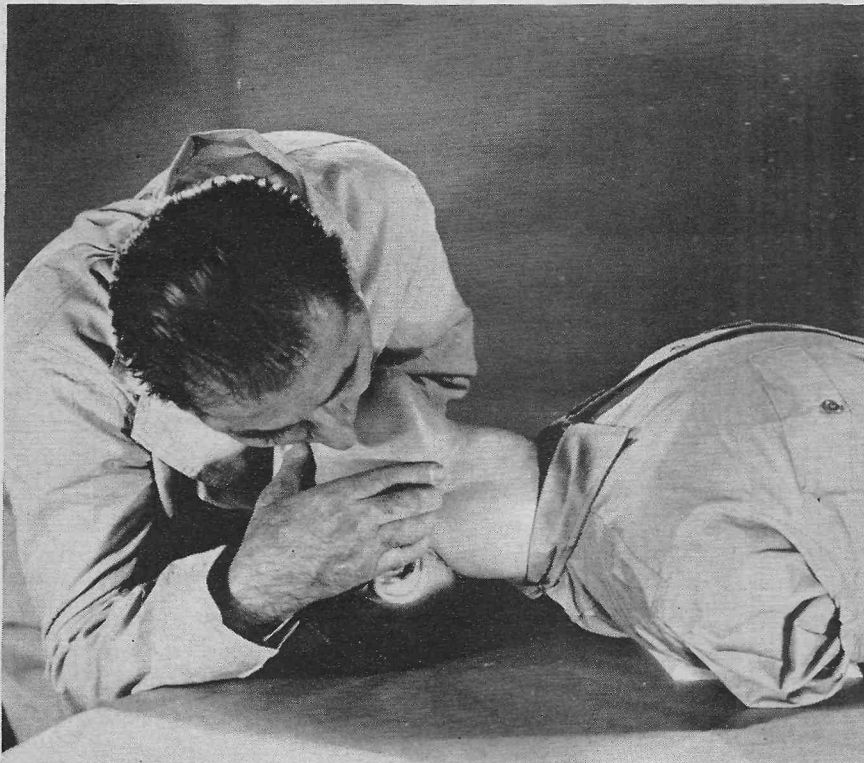
Courtesy of Alderson Research Laboratories, Inc.



Courtesy of Alderson Research Laboratories, Inc.



7. The prognosis is that "Suffering Sam" will live to bleed another day, although his injuries include compound fractures of the humerus and femur and a gunshot wound of the jaw. In the absence of such a manikin, an assortment of paste-on and strap-on injuries transform someone with no more serious affliction than a hangnail into an ambulance case. Believing that experience counts, many first-aid instructors subject their students to such harrowing sights to toughen their nerves in advance of an actual emergency.



8. "Joe Blow" responds to a correct rescue-breathing technique, and his chest fills with air. First-aid trainees practice mouth-to-mouth resuscitation and closed-chest cardiac massage methods on lifelike dummies before they are confronted with the real thing.

*continued on page 94*

The pair of Men-at-Arms strolled along the Rue King John II, near the waterfront of Cherbourg, and a hundred yards south of the sea. In this district, the Keepers of the King's Peace always traveled in pairs, each keeping one hand near the truncheon at his belt and the other near the hilt of his smallsword. The average commoner was not a swordsman, but sailors are not common commoners. A man armed only with a truncheon would be at a disadvantage with a man armed with a cutlass.

The frigid wind from the North Sea whipped the edges of the Men-at-Arms' cloaks, and the light from the mantled gas lamps glowed yellowly, casting multiple shadows that shifted queerly as the Armsmen walked.

There were not many people on the streets. Most of them were in the bistros, where there were coal fires to warm the outer man and fiery bottled goods to warm the inner. There had been crowds in the street on the Vigil of the Feast of the Circumcision, nine days before, but now the Twelfth Day of Christmas had passed and the Year of Our Lord 1964 was in its second week. Money had run short and few could still afford to drink.

The taller of the two officers stopped and pointed ahead. "Ey, Robert. Old Jean hasn't got his light on."

"Hm-m-m. Third time since Christmas. Hate to give the old man a summons."

"Aye. Let's just go in and scare the Hell out of him."

"Aye," said the shorter man. "But we'll promise him a summons next time and keep our promise, Jack."

The sign above the door was a weatherbeaten dolphin-shaped piece of wood, painted blue. The Blue Dolphin.

Armsman Robert pushed open the door and went in, his eyes alert for trouble. There was none. Four men were sitting around one end of the long table at the left, and Old Jean was talking to a fifth man at the bar. They all looked up as the Armsmen came in. Then the men at the table went on with their conversation. The fifth customer's eyes went to his drink. The barkeep smiled ingratiatingly and came toward the two Armsmen.

"Evening, Armsmen," he said with a snaggle-toothed smile. "A little something to warm the blood?" But he knew it was no social call.

Robert already had out his summons book, pencil poised. "Jean, we have warned you twice before," he said frigidly. "The law plainly states that every place of business must maintain a standard gas lamp and keep it lit from sunset to sunrise. You know this."

"Perhaps the wind—" the barkeep said defensively.

"The wind? I will go up with you and we will see if perhaps the wind has turned the gas cock, ey?"

Old Jean swallowed. "Perhaps I did forget. My memory—"

"Perhaps explaining your memory to my lord the



## A Case of Identity

This is a detective story. (They don't go well in science fiction.) It's also about magic. (That's fantasy, of course.) Moreover, the author has his history terribly confused. But those are just prejudices of our own particular time-track; on another time-track, with somewhat different influences . . .

**RANDALL GARRETT**

Marquis next court day will help you to improve it, ey?"

"No, no! Please, Armsman! The fine would ruin me!"

Armsman Robert made motions with his pencil as though he were about to write. "I will say it is first offense and the fine will be only half as much."

Old Jean closed his eyes helplessly. "Please, Armsman. It will not happen again. It is just that I have been so used to Paul—he did everything, all the hard work. I have no one to help me now."

"Paul Sarto has been gone for two weeks now," Robert said. "This is the third time you have given me that same excuse."

"Armsman," said the old man earnestly, "I will not forget again. I promise you."

Robert closed his summons book. "Very well. I have your word? Then you have my word that there will be no excuses next time. I will hand you the summons instantly. Understood?"

"Understood, Armsman! Yes, of course. Many thanks! I will not forget again!"

"See that you don't. Go and light it."

Old Jean scurried up the stairway and was back within minutes. "It's lit now, Armsman."

"Excellent. I expect it to be lit from now on. At sunset. Good night, Jean."

"Perhaps a little—?"

"No, Jean. Another time. Come, Jack."

The Armsmen left without taking the offered drink. It would be ungentlemanly to take it after threatening the man with the law. The Armsman's Manuel said that, because of the sword he is privileged to wear, an Armsman must be a gentleman at all times.

"Wonder why Paul left?" Jack asked when they were on the street again. "He was well paid, and he was too simple to work elsewhere."

Robert shrugged. "You know how it is. Wharf rats come and go. No need to worry about him. A man with a strong back and a weak mind can always find a bistro that will take care of him. He'll get along."

Nothing further was said for the moment. The two Armsmen walked on to the corner, where the Quai Sainte Marie turned off to the south.

Robert glanced southwards and said: "Here's a happy one."

"Too happy, if you ask me," said Jack.

Down the Quai Sainte Marie came a man. He was hugging the side of the building, stumbling towards them, propping himself up by putting the flat of his palms on the brick wall one after the other as he moved his feet. He wore no hat, and, as the wind caught his cloak, the two Men-at-Arms saw something they had not expected. He was naked.

"Blind drunk and freezing," Jack said. "Better take him in."

They never got the chance. As they came toward him, the stumbling man stumbled for the last time. He dropped to his knees, looked up at them with blind eyes that stared past them into the darkness of the sky, then toppled to one side, his eyes still open, unblinking.

Robert knelt down. "Sound your whistle! I think he's dead!"

Jack took out his whistle and keened a note into the frigid air.

"Speak of the Devil," Robert said softly. "It's Paul! He doesn't smell drunk. I think . . . *God!*" He had tried to lift the head of the fallen man and found his palm covered with blood. "It's soft," he said wonderingly. "The whole side of his skull is crushed."

In the distance, they heard the clatter of hoofs as a mounted Sergeant-at-Arms came at a gallop toward the sound of the whistle.

Lord Darcy, tall, lean-faced, and handsome, strode down the hall to the door bearing the arms of Normandy and opened it.

"Your Highness sent for me?" He spoke Anglo-French with a definite English accent.

There were three men in the room. The youngest, tall, blond Richard, Duke of Normandy and brother to His Imperial Majesty, John IV, turned as the door opened. "Ah, Lord Darcy. Come in." He gestured toward the portly man wearing episcopal purple. "My Lord Bishop, may I present my Chief Investigator, Lord Darcy. Lord Darcy, this is his lordship, the Bishop of Guernsey and Sark."

"A pleasure, Lord Darcy," said the Bishop, extending his right hand.

Lord Darcy took the hand, bowed, kissed the ring. "My Lord Bishop." Then he turned and bowed to the third man, the lean, graying Marquis of Rouen. "My Lord Marquis."

Then Lord Darcy faced the Royal Duke again and waited expectantly.

The Duke of Normandy frowned slightly. "There appears to be some trouble with my lord the Marquis of Cherbourg. As you know, My Lord Bishop is the elder brother of the Marquis."

Lord Darcy knew the family history. The previous Marquis of Cherbourg had had three sons. At his death, the eldest had inherited the title and government. The second had taken Holy Orders, and the third had taken a commission in the Royal Navy. When the eldest had died without heirs, the Bishop could not succeed to the title, so the Marquisate went to the youngest son, Hugh, the present Marquis.

"Perhaps you had better explain, My Lord Bishop," said the Duke. "I would rather Lord Darcy had the information firsthand."

"Certainly, Your Highness," said the Bishop. He looked worried, and his right hand kept fiddling with the pectoral cross at his breast.

The Duke gestured toward the chairs. "Please, my lords—sit down."

The four men settled themselves, and the Bishop began his story.

"My brother the Marquis," he said after a deep breath, "is missing."

Lord Darcy raised an eyebrow. Normally, if one of His Majesty's Governors turned up missing, there would be a hue and cry from one end of the Empire to the other—from John O'Groat in Scotland to the southernmost tip of Gascony—from the German border on the east to New England and New France, across the Atlantic. If my lord the Bishop of Guernsey and Sark wanted it kept quiet, then there was—there had *better* be!—a good reason.

"Have you met my brother, Lord Darcy?" the Bishop asked.

"Only briefly, my lord. Once, about a year ago. I hardly know him."

"I see."

The Bishop fiddled a bit more with his pectoral cross, then plunged into his story. Three days before, on the tenth of January, the Bishop's sister-in-law, Elaine, Marquise de Cherbourg, had sent a servant by boat to St. Peter Port, Guernsey, the site of the Cathedral Church of the Diocese of Guernsey and Sark. The sealed message which he was handed informed My Lord Bishop that his brother the Marquis had been missing since the evening of the eighth. Contrary to his custom, My Lord Marquis had not notified My Lady Marquise of any intention to leave the castle. Indeed, he implied that he had intended to retire when he had finished with certain Government papers. No one had seen him since he entered his study. My lady of Cherbourg had not missed him until next morning, when she found that his bed had not been slept in.

"This was on the morning of Thursday the ninth, my lord?" Lord Darcy asked.

"That is correct, my lord," said the Bishop.

"May I ask why we were not notified until now?" Lord Darcy asked gently.

My Lord Bishop fidgeted. "Well, my lord . . . you see . . . well, My Lady Elaine believes that . . . er . . . that his lordship, my brother, is not . . . er . . . *may* not be . . . er . . . quite right in his mind."

*There!* thought Lord Darcy. *He got it out! My Lord of Cherbourg is off his chump! Or, at least, his lady thinks so.*

"What behavior did he display?" Lord Darcy asked quietly.

The Bishop spoke rapidly and concisely. My Lord of Cherbourg had had his first attack on the eve of St. Stephen's Day, the 26th of December, 1963. His face had suddenly taken on a look of utter idiocy; it had gone slack, and the intelligence seemed to fade from his eyes. He had babbled meaninglessly and seemed not to know where he was—and, indeed, to be somewhat terrified of his surroundings.

"Was he violent in any way?" asked Lord Darcy.

"No. Quite the contrary. He was quite docile and easily led to bed. Lady Elaine called in a Healer immediately, suspecting that my brother may have had an apoplectic stroke. As you know, the Marquisate supports a chapter of the Benedictines within the walls of Castle Cherbourg, and Father Patrique saw my brother within minutes.

"But by that time the attack had passed. Father Patrique could detect nothing wrong, and my brother simply said it was a slight dizzy spell, nothing more. However, since then there have been three more attacks—on the evenings of the second, the fifth, and the seventh of this month. And now he is gone."

"You feel, then, My Lord Bishop, that his lordship has had another of these attacks and may be wandering

around somewhere . . . ah . . . *non compos mentis*, as it were?"

"That's exactly what I'm afraid of," the Bishop said firmly.

Lord Darcy looked thoughtful for a moment, then glanced silently at His Royal Highness, the Duke.

"I want you to make a thorough investigation, Lord Darcy," said the Duke. "Be as discreet as possible. We want no scandal. If there is anything wrong with my lord of Cherbourg's mind, we will have the best care taken, of course. But we must find him first." He glanced at the clock on the wall. "There is a train for Cherbourg in forty-one minutes. You will accompany My Lord Bishop."

Lord Darcy rose smoothly from his chair. "I'll just have time to pack, Your Highness." He bowed to the Bishop. "Your servant, my lord." He turned and walked out the door, closing it behind him.

But instead of heading immediately for his own apartments, he waited quietly outside the door, just to one side. He had caught Duke Richard's look.

Within, he heard voices.

"My Lord Marquis," said the Duke, "would you see that My Lord Bishop gets some refreshment? If your lordship will excuse me, I have some urgent work to attend to. A report on this matter must be dispatched immediately to the King my brother."

"Of course, Your Highness; of course."

"I will have a carriage waiting for you and Lord Darcy. I will see you again before you leave, my lord. And now, excuse me."

He came out of the room, saw Lord Darcy waiting, and motioned toward another room nearby. Lord Darcy followed him in. The Duke closed the door firmly and then said, in a low voice:

"This may be worse than it appears at first glance, Darcy. De Cherbourg was working with one of His Majesty's personal agents trying to trace down the ring of Polish *agents provocateurs* operating in Cherbourg. If he's actually had a mental breakdown and they've got hold of him, there will be Hell to pay."

Lord Darcy knew the seriousness of the affair. The Kings of Poland had been ambitious for the past half century. Having annexed all of the Russian territory they could—as far as Minsk to the north and Kiev to the south—the Poles now sought to work their way westwards, toward the borders of the Empire. For several centuries, the Germanic states had acted as buffers between the powerful Kingdom of Poland and the even more powerful Empire. In theory, the Germanic states, as part of the old Holy Roman Empire, owed fealty to the Emperor—but no Anglo-French King had tried to enforce that fealty for centuries. The Germanic states were, in fact, holding their independence because of the tug-of-war between Poland and the Empire. If the troops of King Casimir IX tried to march into Bavaria, for instance,

Bavaria would scream for Imperial help and would get it. On the other hand, if King John IV tried to tax so much as a single sovereign out of Bavaria, and sent troops in to collect it, Bavaria would scream just as loudly for Polish aid. As long as the balance of power remained, the Germanies were safe.

Actually, King John had no desire to bring the Germanies into the Empire forcibly. That kind of aggression hadn't been Imperial policy for a good long time. With hardly any trouble at all, an Imperial army could take over Lombardy or northern Spain. But with the whole New World as Imperial domain, there was no need to add more of Europe. Aggression against her peaceful neighbors was unthinkable in this day and age.

As long as Poland had been moving eastward, Imperial policy had been to allow her to go her way while the Empire expanded into the New World. But that eastward expansion had ground to a halt. King Casimir was now having trouble with those Russians he had already conquered. To hold his quasi-empire together, he had to keep the threat of external enemies always before the eyes of his subjects, but he dared not push any farther into Russia. The Russian states had formed a loose coalition during the last generation, and the King of Poland, Sigismund III, had backed down. If the Russians ever really united, they would be a formidable enemy.

That left the Germanic states to the west and the Turks to the south. Casimir had no desire to tangle with the Turks, but he had plans for the Germanic states.

The wealth of the Empire, the basis of its smoothly expanding economy, was the New World. The importation of cotton, tobacco, and sugar—to say nothing of the gold that had been found in the southern continent—was the backbone of Imperial economy. The King's subjects were well-fed, well-clothed, well-housed, and happy. But if the shipping were to be blocked for any considerable length of time, there would be trouble.

The Polish Navy didn't stand a chance against the Imperial Navy. No Polish fleet could get through the North Sea without running into trouble with either the Imperial Navy or that of the Empire's Scandinavian allies. The North Sea was Imperial-Scandinavian property, jointly patrolled, and no armed ship was allowed to pass. Polish merchantmen were allowed to come and go freely—after they had been boarded to make sure that they carried no guns. Bottled up in the Baltic, the Polish Navy was helpless, and it wasn't big enough or good enough to fight its way out. They'd tried it once, back in '39, and had been blasted out of the water. King Casimir wouldn't try that again.

He had managed to buy a few Spanish and Italian ships and have them outfitted as privateers, but they were merely annoying, not menacing. If caught, they were treated as pirates—either sunk or captured and their crews hanged—and the Imperial Government didn't even bother to protest to the King of Poland.

But King Casimir evidently had something else up his

royal sleeve. Something was happening that had both the Lords of the Admiralty and the Maritime Lords on edge. Ships leaving Imperial ports—Le Havre, Cherbourg, Liverpool, London, and so on—occasionally disappeared. They were simply never heard from again. They never got to New England at all. And the number was more than could be accounted for either by weather or piracy.

That was bad enough, but to make things worse, rumors had been spreading around the waterfronts of the Empire. Primarily the rumors exaggerated the dangers of sailing the Atlantic. The word was beginning to spread that the mid-Atlantic was a dangerous area—far more dangerous than the waters around Europe. A sailor worth his salt cared very little for the threats of weather; give a British or a French sailor a seaworthy ship and a skipper he trusted, and he'd head into the teeth of any storm. But the threat of evil spirits and black magic was something else again.

Do what they would, scientific researchers simply could not educate the common man to understand the intricacies and limitations of modern scientific sorcery. The superstitions of a hundred thousand years still clung to the minds of ninety-nine per cent of the human race, even in a modern, advanced civilization like the Empire. How does one explain that only a small percentage of the population is capable of performing magic? How to explain that all the incantations in the official grimoires won't help a person who doesn't have the Talent? How to explain that, even with the Talent, years of training are normally required before it can be used efficiently, predictably, and with power? People had been told again and again, but deep in their hearts they believed otherwise.

Not one person in ten who was suspected of having the Evil Eye really had it, but sorcerers and priests were continually being asked for counteragents. And only God knew how many people wore utterly useless medallions, charms, and anti-hex shields prepared by quacks who hadn't the Talent to make the spells effective. There is an odd quirk in the human mind that makes a fearful man prefer to go quietly to a wicked-looking, gnarled "witch" for a countercharm than to a respectable licensed sorcerer or an accredited priest of the Church. Deep inside, the majority of people had the sneaking suspicion that evil was more powerful than good and that evil could be counteracted only by more evil. Almost none of them would believe what scientific magical research had shown—that the practice of black magic was, in the long run, more destructive to the mind of the practitioner than to his victims.

So it wasn't difficult to spread the rumor that there was Something Evil in the Atlantic—and, as a result, more and more sailors were becoming leery of shipping aboard a vessel that was bound for the New World.

And the Imperial Government was absolutely certain that the story was being deliberately spread by agents of King Casimir IX.

Two things had to be done: The disappearances must cease, and the rumors must be stopped. And my lord the Marquis of Cherbourg had been working towards those ends when he had disappeared. The question of how deeply Polish agents were involved in that disappearance was an important one.

"You will contact His Majesty's agent as soon as possible," said Duke Richard. "Since there may be black magic involved, take Master Sean along—incognito. If a sorcerer suddenly shows up, they—whoever they may be—might take over. They might even do something drastic to de Cherbourg."

"I will exercise the utmost care, Your Highness," said Lord Darcy.

The train pulled into Cherbourg Station with a hiss and a blast of steam that made a great cloud of fog in the chill air. Then the wind picked up the cloud and blew it to wisps before anyone had stepped from the carriages. The passengers hugged their coats and cloaks closely about them as they came out. There was a light dusting of snow on the ground and on the platform, but the air was clear and the low winter sun shone brightly, if coldly, in the sky.

The Bishop had made a call on the telephon to Cherbourg Castle before leaving Rouen, and there was a carriage waiting for the three men—one of the newer models with pneumatic tires and spring suspension, bearing the Cherbourg arms on the doors, and drawn by two pairs of fine greys. The footmen opened the near door and the Bishop climbed in, followed by Lord Darcy and a short, chubby man who wore the clothing of a gentleman's gentleman. Lord Darcy's luggage was put on the rack atop the carriage, but a small bag carried by the "gentleman's gentleman" remained firmly in the grasp of his broad fist.

Master Sean O Lochlainn, Sorcerer, had no intention of letting go of his professional equipment. He had grumbled enough about not being permitted to carry his symbol-decorated carpet bag, and had spent nearly twenty minutes casting protective spells around the black leather suitcase that Lord Darcy had insisted he carry.

The footman closed the door of the carriage and swung himself aboard. The four greys started off at a brisk trot through the streets of Cherbourg toward the Castle, which lay across the city, near the sea.

Partly to keep My Lord Bishop's mind off his brother's troubles and partly to keep from being overheard while they were on the train, Lord Darcy and the Bishop had tacitly agreed to keep their conversation on subjects other than the investigation at hand. Master Sean had merely sat quietly by, trying to look like a valet—at which he succeeded very well.

Once inside the carriage, however, the conversation seemed to die away. My lord the Bishop settled himself into the cushions and gazed silently out of the window. Master Sean leaned back, folded his hands over his

paunch and closed his eyes. Lord Darcy, like my lord the Bishop, looked out the window. He had only been in Cherbourg twice before, and was not as familiar with the city as he would like to be. It would be worth his time to study the route the carriage was taking.

It was not until they came to the waterfront itself, turned, and moved down the Rue de Mer toward the towers of Castle Cherbourg in the distance, that Lord Darcy saw anything that particularly interested him.

There were, he thought, entirely too many ships tied up at the docks, and there seemed to be a great deal of goods waiting on the wharves to be loaded. On the other hand, there did not seem to be as many men working as the apparent volume of shipping would warrant.

*Crews scared off by the "Atlantic Curse,"* Lord Darcy thought. He looked at the men loafing around in clumps, talking softly but, he thought, rather angrily. *Obviously sailors; out of work by their own choice and resenting their own fears. Probably trying to get jobs as longshoremen and being shut out by the Longshoremen's Guild.*

Normally, he knew, sailors were considered as an auxiliary of the Longshoremen's Guild, just as longshoremen were considered as an auxiliary of the Seamen's Guild. If a sailor decided to spend a little time on land, he could usually get work as a longshoreman; if a longshoreman decided to go to sea, he could usually find a berth somewhere. But with ships unable to find crews, there were fewer longshoremen finding work loading vessels. With regular members of the Longshoremen's Guild unable to find work, it was hardly odd that the Guild would be unable to find work for the frightened seamen who had caused that very shortage.

The unemployment, in turn, threw an added burden on the Privy Purse of the Marquis of Cherbourg, since, by ancient law, it was obligatory upon the lord to take care of his men and their families in times of trouble. Thus far, the drain was not too great, since it was spread out evenly over the Empire; my lord of Cherbourg could apply to the Duke of Normandy for aid under the same law, and His Royal Highness could, in turn, apply to His Imperial Majesty, John IV, King and Emperor of England, France, Scotland, Ireland, New England and New France, Defender of the Faith, et cetera.

And the funds of the Imperial Privy Purse came from all over the Empire.

Still, if the thing became widespread, the economy of the Empire stood in danger of complete collapse.

There had not been a complete cessation of activity on the waterfront, Lord Darcy was relieved to notice. Aside from those ships that were making the Mediterranean and African runs, there were still ships that had apparently found crews for the Atlantic run to the northern continent of New England and the southern continent of New France.

One great ship, the *Pride of Calais*, showed quite a bit of activity; bales of goods were being loaded over the

side amid much shouting of orders. Close by, Lord Darcy could see a sling full of wine casks being lifted aboard, each cask bearing the words: *Ordwin Vayne, Vintner*, and a sorcerer's symbol burnt into the wood, showing that the wine was protected against souring for the duration of the trip. Most of the wine, Lord Darcy knew, was for the crew; by law each sailor was allowed the equivalent of a bottle a day, and, besides, the excellence of the New World wines was such that it did not pay to import the beverage from Europe.

Further on, Lord Darcy saw other ships that he knew were making the Atlantic run loading goods aboard. Evidently the "Atlantic Curse" had not yet frightened the guts out of all of the Empire's seamen.

*We'll come through*, Lord Darcy thought. *In spite of everything the King of Poland can do, we'll come through. We always have.*

He did not think: *We always will*. Empires and societies, he knew, died and were replaced by others. The Roman Empire had died to be replaced by hordes of barbarians who had gradually evolved the feudal society, which had, in turn, evolved the modern system. It was, certainly, possible that the eight-hundred-year old Empire that had been established by Henry II in the Twelfth Century might some day collapse as the Roman Empire had—but it had already existed nearly twice as long, and there were no threatening hordes of barbarians to overrun it nor were there any signs of internal dissent strong enough to disrupt it. The Empire was still stable and still evolving.

Most of that stability and evolution was due to the House of Plantagenet, the House which had been founded by Henry II after the death of King Stephen. Old Henry had brought the greater part of France under the sway of the King of England. His son, Richard the Lion-Hearted, had neglected England during the first ten years of his reign, but, after his narrow escape from death from the bolt of a crossbowman at the Siege of Chaluz, he had settled down to controlling the Empire with a firm hand and a wise brain. He had no children, but his nephew, Arthur, the son of King Richard's dead brother, Geoffrey, had become like a son to him. Arthur had fought with the King against the treacheries of Prince John, Richard's younger brother and the only other claimant to the throne. Prince John's death in 1216 left Arthur as the only heir, and, upon old Richard's death in 1219, Arthur, at thirty-two, had succeeded to the Throne of England. In popular legend, King Arthur was often confused with the earlier King Arthur of Camelot—and for good reason. The monarch who was known even today as Good King Arthur had resolved to rule his realm in the same chivalric manner—partly inspired by the legends of the ancient Brittanic leader, and partly because of his own inherent abilities.

Since then, the Plantagenet line had gone through nearly eight centuries of trial and tribulation; of blood, sweat, toil, and tears; of resisting the enemies of the Em-

pire by sword, fire, and consummate diplomacy to hold the realm together and to expand it.

The Empire had endured. And the Empire would continue to endure only so long as every subject realized that it could *not* endure if the entire burden were left to the King alone. *The Empire expects every man to do his duty.*

And Lord Darcy's duty, at this moment, was greater than the simple duty of finding out what had happened to my lord the Marquis of Cherbourg. The problem ran much deeper than that.

His thoughts were interrupted by the voice of the Bishop.

"There's the tower of the Great Keep ahead, Lord Darcy. We'll be there soon."

It was actually several more minutes before the carriage-and-four drew up before the main entrance of Castle Cherbourg. The door was opened by a footman, and three men climbed out, Master Sean still clutching his suitcase.

My Lady Elaine, Marquise de Cherbourg, stood in her salon above the Great Hall, staring out the window at the Channel. She could see the icy waves splashing and dancing and rolling with almost hypnotic effect, but she saw them without thinking about them.

*Where are you, Hugh?* she thought. *Come back to me, Hugh. I need you. I never knew how much I'd need you.* Then there seemed to be a blank as her mind rested. Nothing came through but the roll of the waves.

Then there was the noise of an opening door behind her. She turned quickly, her long velvet skirts swirling around her like thick syrup. "Yes?" Her voice seemed oddly far away in her ears.

"You rang, my lady." It was Sir Gwiliam, the seneschal.

My Lady Elaine tried to focus her thoughts. "Oh," she said after a moment. "Oh, yes." She waved toward the refreshment table, upon which stood a decanter of Oporto, a decanter of Xerez, and an empty decanter. "Brandy. The brandy hasn't been refilled. Bring some of the Saint Coeurlandt Michele '46."

"The Saint Coeurlandt Michele '46, my lady?" Sir Gwiliam blinked slightly "But my lord de Cherbourg would not—"

She turned to face him directly. "My lord of Cherbourg would most certainly not deny his lady his best Champagne brandy at a time like this, *Sieur Gwiliam!*" she snapped, using the local pronunciation instead of standard Anglo-French, thus employing a mild and unanswerable epithet. "Must I fetch it myself?"

Sir Gwiliam's face paled a little, but his expression did not change. "No, my lady. Your wish is my command."

"Very well. I thank you, Sir Gwiliam." She turned back to the window. Behind her, she heard the door open and close.



Then she turned, walked over to the refreshment table, and looked at the glass she had emptied only a few minutes before.

*Empty, she thought. Like my life. Can I refill it?*

She lifted the decanter of Xerez, took out the stopple, and, with exaggerated care, refilled her glass. Brandy was better, but until Sir Gwiliam brought the brandy there was nothing to drink but the sweet wines. She wondered vaguely why she had insisted on the best and finest brandy in Hugh's cellar. There was no need for it. Any brandy would have done, even the *Aqua Sancta '60*, a foul distillate. She knew that by now her palate was so anesthetized that she could not tell the difference.

But where *was* the brandy? Somewhere. Yes. Sir Gwiliam.

Angrily, almost without thinking, she began to jerk at the bell-pull. Once. Pause. Once. Pause. Once . . .

She was still ringing when the door opened.

"Yes, my lady?"

She turned angrily—then froze.

Lord Seiger frightened her. He always had.

"I rang for Sir Gwiliam, my lord," she said, with as much dignity as she could summon.

Lord Seiger was a big man who had about him the icy coldness of the Norse home from which his ancestors had come. His hair was so blond as to be almost silver, and his eyes were a pale iceberg blue. The Marquise could not recall ever having seen him smile. His handsome face was always placid and expressionless. She realized with a small chill that she would be more afraid of Lord Seiger's smile than of his normal calm expression.

"I rang for Sir Gwiliam," my lady repeated.

"Indeed, my lady," said Lord Seiger, "but since Sir Gwiliam seemed not to answer, I felt it my duty to respond. You rang for him a few minutes ago. Now you are ringing again. May I help?"

"No . . . No . . ." What could she say?

He came into the room, closing the door behind him. Even twenty-five feet away, My Lady Elaine fancied she could feel the chill from him. She could do nothing as he approached. She couldn't find her voice. He was tall and cold and blondly handsome—and had no more sexuality than a toad. Less—for a toad must at least have attraction for another toad—and a toad was at least a living thing. My lady was not attracted to the man, and he hardly seemed living.

He came toward her like a battleship—twenty feet—fifteen . . .

She gasped and gestured toward the refreshment table. "Would you pour some wine, my lord? I'd like a glass of the . . . the Xerez."

It was as though the battleship had been turned in its course, she thought. His course toward her veered by thirty degrees as he angled toward the table.

"Xerez, my lady? Indeed. I shall be most happy."

With precise, strong hands, he emptied the last of the decanter into a goblet. "There is less than a glassful, my

lady," he said, looking at her with expressionless blue eyes. "Would my lady care for the Oporto instead?"

"No . . . No, just the Xerez, my lord, just the Xerez." She swallowed. "Would you care for anything yourself?"

"I never drink, my lady." He handed her the partially filled glass.

It was all she could do to take the glass from his hand, and it struck her as odd that his fingers, when she touched them, seemed as warm as anyone else's.

"Does my lady really feel that it is necessary to drink so much?" Lord Seiger asked. "For the last four days . . ."

My lady's hand shook, but all she could say was: "My nerves, my lord. My nerves." She handed back the glass, empty.

Since she had not asked for more, Lord Seiger merely held the glass and looked at her. "I am here to protect you, my lady. It is my duty. Only your enemies have anything to fear from me."

Somehow, she knew that what he said was true, but—

"Please. A glass of Oporto, my lord."

"Yes, my lady."

He was refilling her glass when the door opened.

It was Sir Gwiliam, bearing a bottle of brandy. "My lady, my lord, the carriage has arrived."

Lord Seiger looked at him expressionlessly, then turned the same face on My Lady Elaine. "The Duke's Investigators. Shall we meet them here, my lady?"

"Yes. Yes, my lord, of course. Yes." Her eyes were on the brandy.

The meeting between Lord Darcy and My Lady Elaine was brief and meaningless. Lord Darcy had no objection to the aroma of fine brandy, but he preferred it fresh rather than secondhand. Her recital of what had happened during the days immediately preceding the disappearance of the Marquis was not significantly different from that of the Bishop.

The coldly handsome Lord Seiger, who had been introduced as secretary to the Marquis, knew nothing. He had not been present during any of the alleged attacks.

My lady the Marquise finally excused herself, pleading a headache. Lord Darcy noted that the brandy bottle went with her.

"My Lord Seiger," he said, "her ladyship seems indisposed. Whom does that leave in charge of the castle for the moment?"

"The servants and household are in charge of Sir Gwiliam de Bracy, the seneschal. The guard is in the charge of Captain Sir Androu Duglasse. I am not My Lord Marquis' Privy Secretary; I am merely aiding him in cataloguing some books."

"I see. Very well. I should like to speak to Sir Gwiliam and Sir Androu."

Lord Seiger stood up, walked over to the bell-pull and signaled. "Sir Gwiliam will be here shortly," he said. "I shall fetch Sir Androu myself." He bowed. "If you will excuse me, my lords."

When he had gone, Lord Darcy said: "An impressive looking man. Dangerous, too, I should say—in the right circumstances."

"Seems a decent sort," said My Lord Bishop. "A bit restrained . . . er . . . stuffy, one might say. Not much sense of humor, but sense of humor isn't everything." He cleared his throat and then went on. "I must apologize for my sister-in-law's behavior. She's overwrought. You won't be needing me for these interrogations, and I really ought to see after her."

"Of course, my lord; I quite understand," Lord Darcy said smoothly.

My Lord Bishop had hardly gone when the door opened again and Sir Gwiliam came in. "Your lordship rang?"

"Will you be seated, Sir Gwiliam?" Lord Darcy gestured toward a chair. "We are here, as you know, to investigate the disappearance of My Lord of Cherbourg. This is my man, Sean, who assists me. All you say here will be treated as confidential."

"I shall be happy to co-operate, your lordship," said Sir Gwiliam, seating himself.

"I am well aware, Sir Gwiliam," Lord Darcy began, "that you have told what you know to My Lord Bishop, but, tiresome as it may be, I shall have to hear the whole thing again. If you will be so good as to begin at the beginning, Sir Gwiliam . . ."

The seneschal dutifully began his story. Lord Darcy and Master Sean listened to it for the third time and found that it differed only in viewpoint, not in essentials. But the difference in viewpoint was important. Like My Lord Bishop, Sir Gwiliam told his story as though he were not directly involved.

"Did you actually ever see one of these attacks?" Lord Darcy asked.

Sir Gwiliam blinked. "Why . . . no. No, your lordship, I did not. But they were reported to me in detail by several of the servants."

"I see. What about the night of the disappearance? When did you last see My Lord Marquis?"

"Fairly early in the evening, your lordship. With my lord's permission, I went into the city about five o'clock for an evening of cards with friends. We played until rather late—two or two-thirty in the morning. My host, Master Ordwin Vayne, a well-to-do wine merchant in the city, of course insisted that I spend the night. That is not unusual, since the castle gates are locked at ten and it is rather troublesome to have a guard unlock them. I returned to the castle, then, at about ten in the morning, at which time my lady informed me of the disappearance of My Lord Marquis."

Lord Darcy nodded. That checked with what Lady Elaine had said. Shortly after Sir Gwiliam had left, she had retired early, pleading a slight cold. She had been the last to see the Marquis of Cherbourg.

"Thank you, sir seneschal," Lord Darcy said. "I should like to speak to the servants later. There is—"

He was interrupted by the opening of the door. It was Lord Seiger, followed by a large, heavy-set, mustached man with dark hair and a scowling look.

As Sir Gwiliam rose, Lord Darcy said: "Thank you for your help, Sir Gwiliam. That will be all for now."

"Thank you, your lordship; I am most anxious to help."

As the seneschal left, Lord Seiger brought the mustached man into the room. "My lord, this is Sir Androu Duglasse, Captain of the Marquis' Own Guard. Captain, Lord Darcy, Chief Investigator for His Highness the Duke."

The fierce-looking soldier bowed. "I am at your service, m' lord."

"Thank you. Sit down, captain."

Lord Seiger retreated through the door, leaving the captain with Lord Darcy and Master Sean.

"I hope I can be of some help, y' lordship," the captain said.

"I think you can, captain," Lord Darcy said. "No one saw my lord the Marquis leave the castle, I understand. I presume you have questioned your guards?"

"I have, y' lordship. We didn't know m' lord was missing until next morning, when m' lady spoke to me. I checked with the men who were on duty that night. The only one to leave after five was Sir Gwiliam, at five oh two, according to the book."

"And the secret passage?" Lord Darcy asked. He had made it a point to study the plans of every castle in the Empire by going over the drawings in the Royal Archives.

The captain nodded. "There is one. Used during times of siege in the old days. It's kept locked and barred nowadays."

"And guarded?" Lord Darcy asked.

Captain Sir Androu chuckled. "Yes, y' lordship. Most hated post in the Guard. Tunnel ends up in a sewer, d'ye see. We send a man out there for mild infractions of the rules. Straightens him out to spend a few nights with the smell and the rats, guarding an iron door that hasn't been opened for years and couldn't be opened from the outside without a bomb—or from the inside, either, since it's rusted shut. We inspect at irregular intervals to make sure the man's on his toes."

"I see. You made a thorough search of the castle?"

"Yes. I was afraid he might have come down with another of those fainting spells he's had lately. We looked everywhere he could have been. He was nowhere to be found, y' lordship. Nowhere. He must have got out somewhere."

"Well, we shall have to—" Lord Darcy was interrupted by a rap on the door.

Master Sean, dutifully playing his part, opened it. "Yes, your lordship?"

It was Lord Seiger at the door. "Would you tell Lord Darcy that Henri Vert, Chief Master-at-Arms of the City of Cherbourg, would like to speak to him?"

For a fraction of a second, Lord Darcy was both surprised and irritated. How had the Chief-Master-at-Arms known he was here? Then he saw what the answer must be.

"Tell him to come in, Sean," said Lord Darcy.

Chief Henri was a heavy-set, tough-looking man in his early fifties who had the air and bearing of a stolid fighter. He bowed. "Lord Darcy. May I speak to your lordship alone?" He spoke Anglo-French with a punctilious precision that showed it was not his natural way of speaking. He had done his best to remove the accent of the local *patois*, but his effort to speak properly was noticeable. "Certainly, Chief Henri. Will you excuse us, captain? I will discuss this problem with you later."

"Of course, your lordship."

Lord Darcy and Master Sean were left alone with Chief Henri.

"I *am* sorry to have interrupted, your lordship," said the Chief, "but His Royal Highness gave strict instructions."

"I had assumed as much, Chief Henri. Be so good as to sit down. Now—what has happened?"

"Well, your lordship," he said, glancing at Master Sean, "His Highness instructed me over the teleson to speak to no one but you." Then the Chief took a good look and did a double take. "By the Blue! Master Sean O Lochlainn! I didn't recognize you in that livery!"

The sorcerer grinned. "I make a very good valet, eh, Henri?"

"Indeed you do! Well, then, I may speak freely?"

"Certainly," said Lord Darcy. "Proceed."

"Well, then." The Chief leaned forward and spoke in a low voice. "When this thing came up, I thought of you first off. I must admit that it's beyond me. On the night of the eighth, two of my men were patrolling the waterfront district. At the corner of Rue King John II and Quai Sainte Marie, they saw a man fall. Except for a cloak, he was naked—and if your lordship remember, that was a very cold night. By the time they got to him, he was dead."

Lord Darcy narrowed his eyes. "How had he died?"

"Skull fracture, your lordship. Somebody'd smashed in the right side of his skull. It's a wonder he could walk at all."

"I see. Proceed."

"Well, he was brought to the morgue. My men both identified him as one Paul Sarto, a man who worked around the bistros for small wages. He was also identified by the owner of the bistro where he had last worked. He seems to have been feeble-minded, willing to do manual labor for bed, board, and spending money. Needed taking care of a bit."

"Hm-m-m. We must trace him and find out why his baron had not provided for him," said Lord Darcy. "Proceed."

"Well, your lordship . . . er . . . there's more to it than that. I didn't look into the case immediately. After all,

another killing on the waterfront—" He shrugged and spread his hands, palms up. "My sorcerer and my surgeon looked him over, made the usual tests. He was killed by a blow from a piece of oak with a square corner—perhaps a two-by-two or something like that. He was struck about ten minutes before the Armsmen found him. My surgeon says that only a man of tremendous vitality could have survived that long—to say nothing of the fact that he was able to walk."

"Excuse me, Henri," Master Sean interrupted. "Did your sorcerer make the FitzGibbon test for post-mortem activation?"

"Of course. First test he made, considering the wound. No, the body had not been activated after death and made to walk away from the scene of the crime. He actually died as the Armsmen watched."

"Just checking," said Master Sean.

"Well, anyway, the affair might have been dismissed as another waterfront brawl, but there were some odd things about the corpse. The cloak he was wearing was of aristocratic cut—not that of a commoner. Expensive cloth, expensive tailoring. Also, he had bathed recently—and, apparently, frequently. His toe- and fingernails were decently manicured and cut."

Lord Darcy's eyes narrowed with interest. "Hardly the condition one would expect of a common laborer, eh?"

"Exactly, my lord. So when I read the reports this morning, I went to take a look. This time of year, the weather permits keeping a body without putting a preservation spell on it."

He leaned forward, and his voice became lower and hoarser. "I only had to take one look, my lord. Then I had to take action and call Rouen. My lord, it is the Marquis of Cherbourg himself!"

Lord Darcy rode through the chilling wintry night on a borrowed horse, his dark cloak whipping around the palfrey's rump in the icy breeze. The chill was more apparent than real. A relatively warm wind had come in from the sea, bringing with it a slushy rain; the temperature of the air was above the freezing point—but not much above it. Lord Darcy had endured worse cold than this, but the damp chill seemed to creep inside his clothing, through his skin, and into his bones. He would have preferred a dry cold, even if it was much colder; at least, a dry cold didn't try to crawl into a man's cloak with him.

He had borrowed the horse from Chief Henri. It was a serviceable hack, well-trained to police work and used to the cobbled streets of Cherbourg.

The scene at the morgue, Lord Darcy thought, had been an odd one. He and Sean and Henri had stood by while the morgue attendant had rolled out the corpse. At first glance, Lord Darcy had been able to understand the consternation of the Chief Master-at-Arms.

He had only met Hugh of Cherbourg once and could hardly be called upon to make a positive identification,

but if the corpse was not the Marquis to the life, the face was his in death.

The two Armsmen who had seen the man die had been asked separately, and without being told of the new identification, still said that the body was that of Paul Sarto, although they admitted he looked cleaner and better cared for than Paul ever had.

It was easy to see how the conflict of opinion came about. The Armsmen had seen the Marquis only rarely—probably only on state occasions, when he had been magnificently dressed. They could hardly be expected to identify a wandering, nearly nude man on the waterfront as their liege lord. If, in addition, that man was immediately identified in their minds with the man they had known as Paul Sarto, the identification of him as my lord the Marquis would be positively forced from their minds. On the other hand, Henri Vert, Chief Master-at-Arms of the City of Cherbourg, knew My Lord Marquis well and had never seen nor heard of Paul Sarto until after the death.

Master Sean had decided that further thaumaturgical tests could be performed upon the deceased. The local sorcerer—a mere journeyman of the Sorcerer's Guild—had explained all the tests he had performed, valiantly trying to impress a Master of the Art with his proficiency and ability.

"The weapon used was a fairly long piece of oak, Master. According to the Kaplan-Sheinwold test, a short club could not have been used. On the other hand, oddly enough, I could find no trace of evil or malicious intent, and—"

"Precisely why I intend to perform further tests, me boy," Master Sean had said. "We haven't enough information."

"Yes, Master," the journeyman sorcerer had said, properly humbled.

Lord Darcy made the observation—which he kept to himself—that if the blow had been dealt from the front, which it appeared to have been, then the killer was either left-handed or had a vicious right-hand backswing. Which, he had to admit to himself, told him very little. The cold chill of the unheated morgue had begun to depress him unduly in the presence of the dead, so he had left that part of the investigation to Master Sean and set out on his own, borrowing a palfrey from Chief Henri for the purpose.

The winters he had spent in London had convinced him thoroughly that no man of intelligence would stay anywhere near a cold seacoast. Inland cold was fine; seacoast warmth was all right. But this—!

Although he did not know Cherbourg well, Lord Darcy had the kind of mind that could carry a map in its memory and translate that map easily into the real world that surrounded him. Even a slight inaccuracy of the map didn't bother him.

He turned his mount round a corner and saw before him a gas lamp shielded with blue glass—the sign of an

outstation of the Armsmen of Cherbourg. An Armsman stood at attention outside.

As soon as he saw that he was confronted by a mounted nobleman, the Man-at-Arms came to attention. "Yes, my lord! Can I aid you, my lord?"

"Yes, Armsman, you can," Lord Darcy said as he vaulted from the saddle. He handed the reins of the horse to the Armsman. "This mount belongs to Chief Henri at headquarters." He showed his card with the ducal arms upon it. "I am Lord Darcy, Chief Investigator for His Royal Highness the Duke. Take care of the horse. I have business in this neighborhood and will return for the animal. I should like to speak to your Sergeant-at-Arms."

"Very good, my lord. The Sergeant is within, my lord."

After speaking to the sergeant, Lord Darcy went out again into the chill night.

It was still several blocks to his destination, but it would have been unwise to ride a horse all the way. He walked two blocks through the dingy streets of the neighborhood. Then, glancing about to make fairly certain he had not been followed or observed, he turned into a dark alley. Once inside, he took off his cloak and reversed it. The lining, instead of being the silk that a nobleman ordinarily wore, or the fur that would be worn in really cold weather, was a drab, worn, brown, carefully patched in one place. From a pocket, he drew a battered slouch hat of the kind normally worn by commoners in this area and adjusted it to his head after carefully mussing his hair. His boots were plain and already covered with mud. Excellent!

He relaxed his spine—normally his carriage was one of military erectness—and slowly strolled out of the other end of the alley.

He paused to light a cheap cigar and then moved on toward his destination.

"*Aaiiy?*" The blowsy-looking woman in her mid-fifties looked through the opening in the heavy door. "What might you be wanting at this hour?"

Lord Darcy gave the face his friendliest smile and answered in the *patois* she had used. "Excuse me, Lady-of-the-House, but I'm looking for my brother, Vincent Coudé. Hate to call on him so late, but—"

As he had expected, he was interrupted.

"We don't allow no one in after dark unless they's identified by one of our people."

"As you shouldn't, Lady-of-the-House," Lord Darcy agreed politely. "But I'm sure my brother Vincent will identify me. Just tell him his brother Richard is here. Ey?"

She shook her head. "He ain't here. Ain't been here since last Wednesday. My girl checks the rooms every day, and he ain't been here since last Wednesday."

*Wednesday!* thought Lord Darcy. *Wednesday the eighth! The night the Marquis disappeared! The night the body was found only a few blocks from here!*

Lord Darcy took a silver coin from his belt pouch and held it out between the fingers of his right hand. "Would you mind going up and taking a look? He might've come in during the day. Might be asleep up there."

She took the coin and smiled. "Glad to; glad to. You might be right; he might've come in. Be right back."

But she left the door locked and closed the panel.

Lord Darcy didn't care about that. He listened carefully to her footsteps. Up the stairs. Down the hall. A knock. Another knock.

Quickly, Lord Darcy ran to the right side of the house and looked up. Sure enough, he saw the flicker of a lantern in one window. The Lady-of-the-House had unlocked the door and looked in to make sure that her roomer was not in. He ran back to the door and was waiting for her when she came down.

She opened the door panel and said sadly: "He still ain't here, Richard."

Lord Darcy handed her another sixth-sovereign piece. "That's all right, Lady-of-the-House. Just tell him I was here. I suppose he's out on business." He paused. "When is his rent next due?"

She looked at him through suddenly narrowed eyes, wondering whether it would be possible to cheat her roomer's brother out of an extra week's rent. She saw his cold eyes and decided it wouldn't.

"He's paid up to the twenty-fourth," she admitted reluctantly. "But if he ain't back by then, I'll be turning his stuff out and getting another roomer."

"Naturally," Lord Darcy agreed. "But he'll be back. Tell him I was here. Nothing urgent. I'll be back in a day or so."

She smiled. "All right. Come in the daytime, if y' can, Friend Richard. Thank y' much."

"Thank y' yourself, Lady-of-the-House," said Lord Darcy. "A good and safe night to y'." He turned and walked away.

He walked half a block and then dodged into a dark doorway.

So! Sir James LeLein, agent of His Majesty's Secret Service, had not been seen since the night of the eight. That evening was beginning to take on a more and more sinister complexion.

He knew full well that he could have bribed the woman to let him into Sir James' room, but the amount he would have had to offer would have aroused suspicion. There was a better way.

It took him better than twenty minutes to find that way, but eventually he found himself on the roof of the two-story rooming house where Sir James had lived under the alias of Vincent Coudé.

The house was an old one, but the construction had been strong. Lord Darcy eased himself down the slope of the shingled roof to the rain gutters at the edge. He had to lie flat, his feet uphill toward the point of the roof, his hands braced against the rain gutter to look

down over the edge toward the wall below. The room in which he had seen the glimmer of light from the woman's lantern was just below him. The window was blank and dark, but the shutters were not drawn, which was a mercy.

The question was: Was the window locked? Holding tight to the rain gutter, he eased himself down to the very edge of the roof. His body was at a thirty-degree angle, and he could feel the increased pressure of blood in his head. Cautiously, he reached down to see if he could touch the window. He could!

Just barely, but he could!

Gently, carefully, working with the tips of the fingers of one hand, he teased the window open. As was usual with these old houses, the glass panes were in two hinged panels that swung inward. He got both of them open.

So far, the rain gutter had held him. It seemed strong enough to hold plenty of weight. He slowly moved himself around until his body was parallel with the edge of the roof. Then he took a good grasp of the edge of the rain gutter and swung himself out into empty air. As he swung round, he shot his feet out toward the lower sill of the window.

Then he let go and tumbled into the room.

He crouched motionlessly for a moment. Had he been heard? The sound had seemed tremendous when his feet had struck the floor. But it was still early, and there were others moving about in the rooming house. Still, he remained unmoving for a good two minutes to make sure there would be no alarm. He was quite certain that if the Lady-of-the-House had heard anything that disturbed her, she would have rushed up the stairs. No sound. Nothing.

Then he rose to his feet and took a special device from the pocket of his cloak.

It was a fantastic device, a secret of His Majesty's Government. Powered by the little zinc-copper couples that were the only known source of such magical power, they heated a steel wire to tremendously high temperature. The thin wire glowed white-hot, shedding a yellow-white light that was almost as bright as a gas-mantle lamp. The secret lay in the magical treatment of the steel filament. Under ordinary circumstances, the wire would burn up in a blue-white flash of fire. But, properly treated by a special spell, the wire was passivated and merely glowed with heat and light instead of burning. The hot wire was centered at the focus of a parabolic reflector, and merely by shoving forward a button with his thumb, Lord Darcy had at hand a light source equal to—and indeed far superior to—an ordinary dark lantern. It was a personal instrument, since the passivation was tuned to Lord Darcy and no one else.

He thumbed the button and a beam of light sprang into existence.

The search of Sir James LeLein's room was quick and thorough. There was absolutely nothing of any interest to Lord Darcy anywhere in the room.

Naturally Sir James would have taken pains to assure that there would not be. The mere fact that the housekeeper had a key would have made Sir James wary of leaving anything about that would have looked out of place. There was nothing here that would have identified the inhabitant of the room as anyone but a common laborer.

Lord Darcy switched off his lamp and brooded for a moment in the darkness. Sir James was on a secret and dangerous mission for His Imperial Majesty, John IV. Surely there were reports, papers, and so on. Where had Sir James kept the data he collected? In his head? That was possible, but Lord Darcy didn't think it was true.

Sir James had been working with Lord Cherbourg. Both of them had vanished on the night of the eighth. That the mutual vanishing was coincidental was possible—but highly improbable. There were too many things unexplained as yet. Lord Darcy had three tentative hypothesis, all of which explained the facts as he knew them thus far, and none of which satisfied him.

It was then that his eyes fell on the flowerpot silhouetted against the dim light that filtered in from outside the darkened room. If it had been in the middle of the window sill, he undoubtedly would have smashed it when he came in; his feet had just barely cleared the sill. But it was over to one side, in a corner of the window. He walked over and looked at it carefully in the dimness. Why, he asked himself, would an agent of the King be growing an African violet?

He picked up the little flowerpot, brought it away from the window, and shone his light on it. It looked utterly usual.

With a grim smile, Lord Darcy put the pot, flower and all, into one of the capacious pockets of his cloak. Then he opened the window, eased himself over the sill, lowered himself until he was hanging only by his fingertips, and dropped the remaining ten feet to the ground, taking up the jar of landing with his knees.

Five minutes later, he had recovered his horse from the Armsmen and was on his way to Castle Cherbourg.

The monastery of the Order of Saint Benedict in Cherbourg was a gloomy-looking pile of masonry occupying one corner of the great courtyard that surrounded the castle. Lord Darcy and Master Sean rang the bell at the entrance gate early on the morning of Tuesday, January 14th. They identified themselves to the doorkeeper and were invited into the Guests' Common Room to wait while Father Patrique was summoned. The monk would have to get the permission of the Lord Abbot to speak to outsiders, but that was a mere formality.

It was a relief to find that the interior of the monastery did not share the feeling of gloom with its exterior. The Common Room was quite cheerful and the winter sun shone brightly through the high windows.

After a minute or so, the inner door opened and a tall, rather pale man in Benedictine habit entered the room.

He smiled pleasantly as he strode briskly across the room to take Lord Darcy's hand. "Lord Darcy, I am Father Patrique. Your servant, my lord."

"And I yours, your reverence. This is my man, Sean."

The priest turned to accept the introduction, then he paused and a gleam of humor came into his eyes. "Master Sean, the clothing you wear is not your own. A sorcerer cannot hide his calling by donning a valet's outfit."

Master Sean smiled back. "I hadn't hoped to conceal myself from a perceptive of your Order, Reverend Sir."

Lord Darcy, too, smiled. He had rather hoped that Father Patrique would be a perceptive. The Benedictines were quite good in bringing out that particular phase of Talent if a member of their Order had it, and they prided themselves on the fact that Holy Father Benedict, their Founder in the early part of the Sixth Century, had showed that ability to a remarkable degree long before the Laws of Magic had been formulated or investigated scientifically. To such a perceptive, identity cannot be concealed without a radical change in the personality itself. Such a man is capable of perceiving, *in toto*, the personality of another; such men are invaluable as Healers, especially in cases of demonic possession and other mental diseases.

"And now, how may I help you, my lord?" the Benedictine asked pleasantly.

Lord Darcy produced his credentials and identified himself as Duke Richard's Chief Investigator.

"Quite so," said the priest. "Concerning the fact that my lord the Marquis is missing, I have no doubt."

"The walls of a monastery are not totally impenetrable, are they, Father?" Lord Darcy asked with a wry smile.

Father Patrique chuckled. "We are wide open to the sight of God and the rumors of man. Please be seated; we will not be disturbed here."

"Thank you, Father," Lord Darcy said, taking a chair. "I understand you were called to attend my lord of Cherbourg several times since last Christmas. My lady of Cherbourg and my lord the Bishop of Guernsey and Sark have told me of the nature of these attacks—that, incidentally, is why this whole affair is being kept as quiet as possible—but I would like your opinion as a Healer."

The priest shrugged his shoulders and spread his hands a little. "I should be glad to tell you what I can, my lord, but I am afraid I know almost nothing. The attacks lasted only a few minutes each time and they had vanished by the time I was able to see My Lord Marquis. By then, he was normal—if a little puzzled. He told me he had no memory of such behavior as my lady reported. He simply blanked out and then came out of it, feeling slightly disoriented and a little dizzy."

"Have you formed no diagnosis, Father?" Lord Darcy asked.

The Benedictine frowned. "There are several possible diagnoses, my lord. From my own observation, and from the symptoms reported by My Lord Marquis, I would have put it down as a mild form of epilepsy—what we

call the *petit mal* type, the 'little sickness'. Contrary to popular opinion, epilepsy is not caused by demonic possession, but by some kind of organic malfunction that we know very little about.

"In *grand mal*, or 'great sickness' epilepsy, we find the seizures one normally thinks of as being connected with the disease—the convulsive 'fits' that cause the victim to completely lose control of his muscles and collapse with jerking limbs and so on. But the 'little sickness' merely causes brief loss of consciousness—sometimes so short that the victim does not even realize it. There is no collapse or convulsion; merely a blank daze lasting a few seconds or minutes."

"But you are not certain of that?" Lord Darcy asked.

The priest frowned. "No. If my lady the Marquise is telling the truth—and I see no reason why she should not his behavior during the . . . well, call them seizures . . . his behavior during the seizures was atypical. During a typical seizure of the *petit mal* type, the victim is totally blank—staring at nothing, unable to speak or move, unable to be roused. But my lord was not that way, according to my lady. He seemed confused, bewildered, and very stupid, but he was *not* unconscious." He paused and frowned.

"Therefore you have other diagnoses, Father?" Lord Darcy prompted.

Father Patrique nodded thoughtfully. "Yes. Always assuming that my lady the Marquise has reported accurately, there are other possible diagnoses. But none of them quite fits, any more than the first one does."

"Such as?"

"Such as attack by psychic induction."

Master Sean nodded slowly, but there was a frown in his eyes.

"The wax-and-doll sort of thing," said Lord Darcy.

Father Patrique nodded an affirmative. "Exactly, my lord—although, as you undoubtedly know, there are far better methods than that—in practice."

"Of course," Lord Darcy said brusquely. In theory, he knew, the simulacrum method *was* the best method. Nothing could be more powerful than an exact duplicate, according to the Laws of Similarity. The size of the simulacrum made little difference, but the accuracy of detail did—including internal organs.

But the construction of a wax simulacrum—aside from the artistry required—entailed complications which bordered on the shadowy area of the unknown. Beeswax was more effective than mineral wax for the purpose because it was an animal product instead of a mineral one, thus increasing the similarity. But why did the addition of sal ammoniac increase the potency? Magicians simply said that sal ammoniac, saltpeter, and a few other minerals increased the similarity in some unknown way and let it go at that; sorcerers had better things to do than grub around in mineralogy.

"The trouble is," said Father Patrique, "that the psy-

chic induction method nearly always involves physical pain or physical illness—intestinal disorders, heart trouble, or other glandular disturbances. There are no traces of such things here unless one considers the malfunction of the brain as a glandular disorder—and even so, it should be accompanied by pain."

"Then you discount that diagnosis, too?" asked Lord Darcy.

Father Patrique shook his head firmly. "I discount none of the diagnoses I have made thus far. My data are far from complete."

"You have other theories, then?"

"I do, my lord. Actual demonic possession."

Lord Darcy narrowed his eyes and looked straight into the eyes of the priest. "You don't really believe that, Reverend Sir."

"No," Father Patrique admitted candidly, "I do not. As a perceptive, I have a certain amount of faith in my own ability. If more than one personality were inhabiting my lord's body, I am certain I would have perceived the . . . er . . . other personality."

Lord Darcy did not move his eyes from those of the Benedictine. "I had assumed as much, your reverence," he said. "If it were a case of multiple personality, you would have detected it, eh?"

"I am certain I would have, my lord," Father Patrique stated positively. "If my lord of Cherbourg had been inhabited by another personality, I would have detected it, even if that other personality had been under cover." He paused, then waved a hand slightly. "You understand, Lord Darcy? Alternate personalities in a single human body, a single human brain, can hide themselves. The personality dominant at any given time conceals to the casual observer the fact that other—different—personalities are present. But the . . . the *alter egos* cannot conceal themselves from a true perceptive."

"I understand," Lord Darcy said.

"There was only one personality in the . . . the *person*, the *brain*, of the Marquis of Cherbourg at the time I examined him. And that personality was the personality of the Marquis himself."

"I see," Lord Darcy said thoughtfully. He did not doubt the priest's statement. He knew the reputation Father Patrique had among Healers. "How about drugs, Father?" he asked after a moment. "I understand that there are drugs which can alter a man's personality."

The Benedictine Healer smiled. "Certainly. Alcohol—the essence of wines and beers—will do it. There are others. Some have a temporary effect; others have no effect in single dosages—or, at least, no detectable effect—but have an accumulative effect if the drug is taken regularly. Oil of wormwood, for instance, is found in several of the more expensive liqueurs—in small quantity, of course. If you get drunk on such a liqueur, the effect is temporary and hardly distinguishable from that of alcohol alone. But if taken steadily, over a period of time, a definite personality change occurs."

Lord Darcy nodded thoughtfully, then looked at his sorcerer. "Master Sean, the phial, if you please."

The tubby little Irish sorcerer fished in a pocket with thumb and forefinger and brought forth a small stoppered glass phial a little over an inch long and half an inch in diameter. He handed it to the priest, who looked at it with curiosity. It was nearly filled with a dark amber fluid. In the fluid were little pieces of dark matter, rather like coarse-cut tobacco, which had settled to the bottom of the phial and filled perhaps a third of it.

"What is it?" Father Patrique asked.

Master Sean frowned. "That's what I'm not rightly sure of, Reverend Sir. I checked it to make certain there were no spells on it before I opened it. There weren't. So I unstoppered it and took a little whiff. Smells like brandy, with just faint overtones of something else. Naturally, I couldn't analyze it without having some notion of what it was. Without a specimen standard, I couldn't use Similarity analysis. Oh, I checked the brandy part, and that came out all right. The liquid is brandy. But I can't identify the little crumbs of stuff. His lordship had an idea that it might be a drug of some kind, and, since a Healer has all kinds of *materia medica* around, I thought perhaps we might be able to identify it."

"Certainly," the priest agreed. "I have a couple of ideas we might check right away. The fact that the material is steeped in brandy indicates either that the material decays easily or that the essence desired is soluble in brandy. That suggests several possibilities to my mind." He looked at Lord Darcy. "May I ask where you got it, my lord?"

Lord Darcy smiled. "I found it buried in a flowerpot."

Father Patrique, realizing that he had been burdened with all the information he was going to get, accepted Lord Darcy's statement with a slight shrug. "Very well, my lord; Master Sean and I will see if we can discover what this mysterious substance may be."

"Thank you, Father." Lord Darcy rose from his seat. "Oh—one more thing. What do you know about Lord Seiger?"

"Very little. His lordship comes from Yorkshire . . . North Riding, if I'm not mistaken. He's been working with my lord of Cherbourg for the past several months—something to do with books, I believe. I know nothing of his family or anything like that, if that is what you mean."

"Not exactly," said Lord Darcy. "Are you his Confessor, Father? Or have you treated him as a Healer?"

The Benedictine raised his eyebrows. "No. Neither. Why?"

"Then I can ask you a question about his soul. What kind of man is he? What is the oddness I detect in him? What is it about him that frightens my lady the Marquise in spite of his impeccable behavior?" He noticed the hesitation in the priest's manner and went on before Father Patrique could answer. "This is not idle curiosity, Your Reverence. I am investigating a homicide."

The priest's eyes widened. "Not . . . ?" He stopped himself. "I see. Well, then. Granted, as a perceptive, I know certain things about Lord Seiger. He suffers from a grave illness of the soul. How these things come about, we do not know, but occasionally a person utterly lacks that part of the soul we call 'conscience', at least insofar as it applies to certain acts. We cannot think that God would fail to provide such a thing; therefore theologians ascribe the lack to an act of the Devil at some time in the early life of the child—probably prenatally and, therefore, before baptism can protect the child. Lord Seiger is such a person. A psychopathic personality. Lord Seiger was born without an ability to distinguish between 'right' and 'wrong' as we know the terms. Such a person performs a given act or refrains from performing it only according to the expediency of the moment. Certain acts which you or I would look upon with abhorrence he may even look upon a pleasurable. Lord Seiger is—basically—a homicidal psychopath."

Lord Darcy said, "I thought as much." Then he added dryly, "He is, I presume, under restraint?"

"Oh, of course; of course!" The priest looked aghast that anyone should suggest otherwise. "Naturally such a person cannot be condemned because of a congenital deficiency, but neither can he be allowed to become a danger to society." He looked at Master Sean. "You know something of Geas Theory, Master Sean?"

"Something," Master Sean agreed. "Not my field, of course, but I've studied a little of the theory. The symbol manipulation's a little involved for me, I'm afraid. Psychic Algebra's as far as I ever got."

"Of course. Well, Lord Darcy, to put it in layman's terms, a powerful spell is placed upon the affected person—a *geas*, it's called—which forces them to limit their activities to those which are not dangerous to his fellow man. We cannot limit him too much, of course, for it would be sinful to deprive him entirely of his free will. His sexual morals, for instance, are his own—but he cannot use force. The extent of the *geas* depends upon the condition of the individual and the treatment given by the Healer who performed the work."

"It takes an extensive and powerful knowledge of sorcery, I take it?" Lord Darcy asked.

"Oh, yes. No Healer would even attempt it until he had taken his Th.D. and then specialized under an expert for a time. And there are not many Doctors of Thaumaturgy. Since Lord Seiger is a Yorkshireman, I would venture to guess that the work was done by His Grace the Archbishop of York—a most pious and powerful Healer. I, myself, would not think of attempting such an operation."

"You can, however, tell that such an operation has been performed?"

Father Patrique smiled. "As easily as a surgeon can tell if an abdominal operation has been performed."

"Can a *geas* be removed? Or partially removed?"

"Of course—by one equally as skilled and powerful."



But I could detect that, too. It has not been done in Lord Seiger's case."

"Can you tell what channels of freedom he has been allowed?"

"No," said the priest. "That sort of thing depends upon the fine structure of the *geas*, which is difficult to observe without extensive analysis."

"Then," said Lord Darcy, "you cannot tell me whether or not there are circumstances in which his *geas* would permit him to kill? Such as, for instance . . . er . . . self-defense?"

"No," the priest admitted. "But I will say that it is rare indeed for even such a channel as self-defense to be left open for a psychopathic killer. The *geas* in such a case would necessarily leave the decision as to what constituted 'self-defense' up to the patient. A normal person knows when 'self-defense' requires killing one's enemy, rendering him unconscious, fleeing from him, giving him a sharp retort, or merely keeping quiet. But to a psychopathic killer, a simple insult may be construed as an attack which requires 'self-defense'—which would give him permission to kill. No Healer would leave such a decision in the hands of the patient." His face grew somber. "Certainly no sane man would leave that decision to the mind of a man like Lord Seiger."

"Then you consider him safe, Father?"

The Benedictine hesitated only a moment. "Yes. Yes, I do. I do not believe him capable of committing an anti-social act such as that. The Healer took pains to make sure that Lord Seiger would be protected from most of his fellow men, too. He is almost incapable of committing any offense against propriety; his behavior is impeccable at all times; he cannot insult anyone; he is almost incapable of defending himself physically except under the greatest provocation.

"I once watched him in a fencing bout with my lord the Marquis. Lord Seiger is an expert swordsman—much better than my lord the Marquis. The Marquis was utterly unable to score a touch upon Lord Seiger's person; Lord Seiger's defense was far too good. *But*—neither could Lord Seiger score a touch upon my lord. He couldn't even try. His brilliant swordsmanship is purely and completely defensive." He paused. "You are a swordsman yourself, my lord?" It was only half a question; the priest was fairly certain that a Duke's Investigator would be able to handle any and all weapons with confidence.

He was perfectly correct. Lord Darcy nodded without answering. To be able to wield a totally defensive sword required not only excellent—superlative—swordsmanship, but the kind of iron self-control that few men possessed. In Lord Seiger's case, of course, it could hardly be called *self-control*. The control had been imposed by another.

"Then you can understand," the priest continued, "why I say that I believe he can be trusted. If his Healer found it necessary to impose so many restrictions and protections, he would most certainly not have left any

channel open for Lord Seiger to make any decision for himself as to when it would be proper to kill another."

"I understand, Father. Thank you for your information. I assure you it will remain confidential."

"Thank you, my lord. If there is nothing else . . . ?"

"Nothing for the moment, Reverend Father. Thank you again."

"A pleasure, Lord Darcy. And now, Master Sean, shall we go to my laboratory?"

An hour later, Lord Darcy was sitting in the guest room which Sir Gwiliam had shown him to the day before. He was puffing at his Bavarian pipe, filled with a blend of tobacco grown in the Southern Duchies of New England, his mind working at high speed, when Master Sean entered.

"My lord," said the tubby little sorcerer with a smile, "the good Father and I have identified the substance."

"Good!" Lord Darcy gestured toward a chair. "What was it?"

Master Sean sat down. "We were lucky, my lord. His Reverence *did* have a sample of the drug. As soon as we were able to establish a similarity between our sample and his, we identified it as a mushroom known as the Devil's Throne. The fungus is dried, minced, and steeped in brandy or other spirit. The liquid is then decanted off and the minced bits are thrown away—or, sometimes, steeped a second time. In large doses, the drugged spirit results in insanity, convulsions, and rapid death. In small doses, the preliminary stages are simply mild euphoria and light intoxication. But if taken regularly, the effect is cumulative—first, a manic, hallucinatory state, then delusions of persecution and violence."

Lord Darcy's eyes narrowed. "That fits. Thank you. Now there is one more problem. I want positive identification of that corpse. My Lord Bishop is not certain that it is his brother; that may just be wishful thinking. My Lady Marquise refuses to view the body, saying that it could not possibly be her husband—and that is *definitely* wishful thinking. But *I* must know for certain. Can you make a test?"

"I can take blood from the heart of the dead man and compare it with blood from My Lord Bishop's veins, my lord."

"Ah, yes. The Jacoby transfer method," said Lord Darcy.

"Not quite, my lord. The Jacoby transfer requires at least two hearts. It is dangerous to take blood from a living heart. But the test I have in mind is equally as valid."

"I thought blood tests were unreliable between siblings."

"Well, now, as to that, my lord," Master Sean said, "in theory there is a certain very low probability that brother and sister, children of the same parents, would show completely negative results. In other words, they would have zero similarity in that test.

"Blood similarity runs in a series of steps from zero

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to forty-six. In a parent-child relationship, the similarity is always exactly twenty-three—in other words, the child is always related half to one parent and half to the other.

“With siblings, though, we find variations. Identical twins, for instance, register a full forty-six point similarity. Most siblings run much less, averaging twenty-three. There *is* a possibility of two brothers or two sisters having only one-point similarity, and, as I said, my lord, of a brother and sister having zero similarity. But the odds are on the order of one point seven nine million million to one against it. Considering the facial similarity of My Lord Bishop and My Lord Marquis, I would be willing to stake my reputation that the similarity would be substantially greater than zero—perhaps greater than twenty-three.”

“Very well, Master Sean. You have not failed me yet; I do not anticipate that you ever will. Get me that data.”

“Yes, my lord. I shall endeavor to give satisfaction.” Master Sean left suffused with a glow of mixed determination and pride.

Lord Darcy finished his pipe and headed for the offices of Captain Sir Androu Duglasse.

The captain looked faintly indignant at Lord Darcy’s question. “I searched the castle quite thoroughly, y’ lordship. We looked everywhere that M’ Lord Marquis could possibly have gone.”

“Come, captain,” Lord Darcy said mildly, “I don’t mean to impugn your ability, but I dare say there are places you didn’t search simply because there was no



reason to think my lord of Cherbourg would have gone there."

Captain Sir Androu frowned. "Such as, my lord?"

"Such as the secret tunnel."

The captain looked suddenly blank. "Oh," he said after a moment. Then his expression changed. "But surely, y'lordship, you don't think . . ."

"I don't *know*, that's the point. My lord *did* have keys to every lock in the castle, didn't he?"

"All except to the monastery, yes. My Lord Abbot has those."

"Naturally. I think we can dismiss the monastery. Where else did you not look?"

"Well . . ." The captain hesitated thoughtfully. "I didn't bother with the strongroom, the wine cellar, or the ice-

house. I don't have the keys. Sir Gwiliam would have told me if anything was amiss."

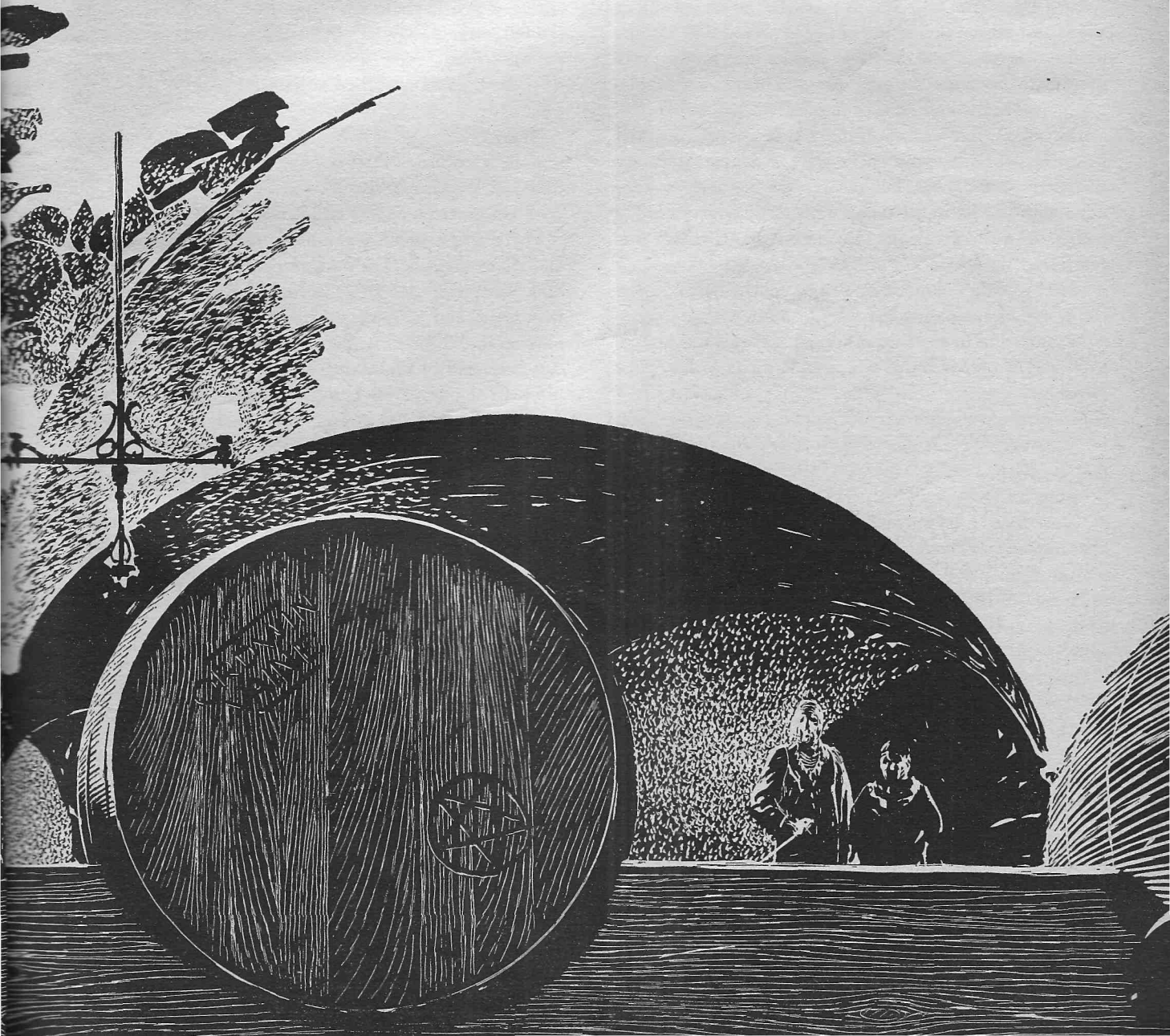
"Sir Gwiliam has the keys, you say? Then we must find Sir Gwiliam."

Sir Gwiliam, as it turned out, was in the wine cellar. Lord Seiger informed them that, at Lady Elaine's request, he had sent the seneschal down for another bottle of brandy. Lord Darcy followed Captain Sir Androu down the winding stone steps to the cellars.

"Most of this is used as storage space," the captain said, waving a hand to indicate the vast, dim rooms around them. "All searched very carefully. The wine cellar's this way, y' lordship."

The wine-cellar door, of heavy, reinforced oak, stood slightly ajar. Sir Gwiliam, who had evidently heard their

Illustrated by John Schoenherr



footsteps, opened it a little more and put his head out. "Who is it? Oh. Good afternoon, my lord. Good afternoon, captain. May I be of service?"

He stepped back, opening the door to let them in.

"I thank you, Sir Gwiliam," said Lord Darcy. "We come partly on business and partly on pleasure. I have noticed that my lord the Marquis keeps an excellent cellar; the wines are of the finest and the brandy is extraordinary. Saint Coeurlandt Michele '46 is difficult to come by these days."

Sir Gwiliam looked rather sad. "Yes, your lordship, it is. I fear the last two cases in existence are right here. I now have the painful duty of opening one of them." He sighed and gestured toward the table, where stood a wooden case that had been partially pried open. A glance told Lord Darcy that there was nothing in the bottles but brandy and that the leaden seals were intact.

"Don't let us disturb you, Sir Gwiliam," Lord Darcy said. "May we look around?"

"Certainly, your lordship. A pleasure." He went back to work on opening the brandy case with a pry bar.

Lord Darcy ran a practiced eye over the racks, noting labels and seals. He had not really expected that anyone would attempt to put drugs or poison into bottles; My Lady Elaine was not the only one who drank, and wholesale poisoning would be too unselective.

The wine cellar was not large, but it was well stocked with excellent vintages. There were a couple of empty shelves in one corner, but the rest of the shelves were filled with bottles of all shapes and sizes. Over them lay patinas of dust of various thicknesses. Sir Gwiliam was careful not to bruise his wines.

"His lordship's choices, or yours, Sir Gwiliam?" Lord Darcy asked, indicating the rows of bottles.

"I am proud to say that My Lord Marquis has always entrusted the selection of wines and spirits to me, your lordship."

"I compliment both of you," Lord Darcy said. "You for your excellent taste, and his lordship for recognizing that ability in you." He paused. "However, there is more pressing business."

"How may I help you, my lord?" Having finished opening the case, he dusted off his hands and looked with a mixture of pride and sadness at the Saint Coeurlandt Michele '46. Distilled in 1846 and aged in the wood for thirty years before it was bottled, it was considered possibly the finest brandy ever made.

Quietly, Lord Darcy explained that there had been several places where Captain Sir Androu had been unable to search. "There is the possibility, you see, that he might have had a heart attack—or some sort of attack—and collapsed to the floor."

Sir Gwiliam's eyes opened wide. "And he might be there yet? God in Heaven! Come, your lordship! This way! I have been in the icehouse, and so has the chef, but no one has opened the strongroom!"

He took the lead, running, with Lord Darcy right

behind him and Sir Androu in the rear. It was not far, but the cellar corridors twisted oddly and branched frequently.

The strongroom was more modern than the wine cellar; the door was of heavy steel, swung on gimbaled hinges. The walls were of stone and concrete, many feet thick.

"It's a good thing the captain is here, your lordship," the seneschal said breathlessly as the three men stopped in front of the great vault door. "It takes two keys to open it. I have one, the captain has the other. My Lord Marquis, of course, has both. Captain?"

"Yes, yes, Gwiliam; I have mine here."

There were four keyholes on each side of the wide door. Lord Darcy recognized the type of construction. Only one of the four keyholes on each side worked. A key put into the wrong hole would ring alarms. The captain would know which hole to put his own key in, and so would Sir Gwiliam—but neither knew the other's proper keyhole. The shields around the locks prevented either man from seeing which keyhole the other used. Lord Darcy could not tell, even though he watched. The shields covered the hands too well.

"Ready, captain?" Sir Gwiliam asked.

"Ready."

"Turn."

Both men turned their keys at once. The six-foot wide door clicked inside itself and swung open when Sir Gwiliam turned a handle on his side of the door.

There was a great deal worthy of notice inside—gold and silver utensils; the jeweled coronets of the Marquis and Marquise; the great Robes of State, embroidered with gold and glittering with gems—in short, all the paraphernalia for great occasions of state. In theory, all this belonged to the Marquis; actually, it was no more his than the Imperial Crown Jewels belonged to King John IV. Like the castle, it was a part of the office; it could be neither pawned nor sold.

But nowhere in the vault was there any body, dead or alive, nor any sign that there had ever been one.

"Well!" said Sir Gwiliam with a sharp exhalation. "I'm certainly glad of that! You had me worried, your lordship." There was a touch of reproach in his voice.

"I am as happy to find nothing as you are. Now let's check the icehouse."

The icehouse was in another part of the cellars and was unlocked. One of the cooks was selecting a roast. Sir Gwiliam explained that he unlocked the icehouse each morning and left the care of it with the Chief of the Kitchen, locking it again each night. A careful search of the insulated, ice-chilled room assured Lord Darcy that there was no one there who shouldn't be.

"Now we'll take a look in the tunnel," Lord Darcy said. "Have you the key, Sir Gwiliam?"

"Why . . . why, yes. But it hasn't been opened for years! Decades! Never since I've been here, at any rate."

"I have a key, myself, y' lordship," said the captain. "I just never thought of looking. Why would he go there?"

"Why, indeed? But we must look, nevertheless."

A bell rang insistently in the distance, echoing through the cellars.

"Dear me!" said Sir Gwiliam. "My lady's brandy! I quite forgot about it! Sir Androu has a key to the tunnel, my lord; would you excuse me?"

"Certainly, Sir Gwiliam. Thank you for your help."

"A pleasure, my lord." He hurried off to answer the bell.

"Did you actually expect to find My Lord Marquis in any of those places your lordship?" asked Sir Androu. "Even if my lord had gone into one of them, would he have locked the door behind him?"

"I did not expect to find him in the wine cellar or the icehouse," Lord Darcy said, "but the strongroom presented a strong possibility. I merely wanted to see if there were any indications that he had been there. I must confess that I found none."

"To the tunnel, then," said the captain.

The entrance was concealed behind a shabby, unused cabinet. But the cabinet swung away from the steel door behind it with oiled smoothness. And when the captain took out a dull, patinaed key and opened the door, the lock turned smoothly and effortlessly.

The captain looked at his key, now brightened by abrasion where it had forced the wards, as though it were imbued with magic. "Well, I'll be cursed!" he said softly.

The door swung silently open to reveal a tunnel six feet wide and eight high. Its depths receded into utter blackness.

"A moment, m' lord," said the captain. "I'll get a lamp." He walked back down the corridor and took an oil lamp from a wall bracket.

The two of them walked down the tunnel together. On either side, the niter-stained walls gleamed whitely. The captain pointed down at the floor. "Somebody's been using this lately," he said softly.

"I had already noticed the disturbed dust and crushed crystals of niter," Lord Darcy said. "I agree with you."

"Who's been using the tunnel, then, y'lordship?"

"I am confident that my lord the Marquis of Cherbourg was one of them. His . . . er . . . confederates were here, too."

"But why? And how? No one could have got out without my guard seeing them."

"I am afraid you are right, my good captain." He smiled. "But that doesn't mean that the guard would have reported to you if his liege lord told him not to . . . eh?"

Sir Androu stopped suddenly and looked at Lord Darcy. "Great God in Heaven! And I thought—!" He brought himself up short.

"You thought *what*? Quickly, man!"

"Y' lordship, a new man enlisted in the Guard two months ago. Came in on m' lord's recommendation. Then

m' lord reported that he misbehaved and had me put him on the sewer detail at night. The man's been on that detail ever since."

"Of course!" Lord Darcy said with a smile of triumph. "He would put one of his own men on. Come, captain; I must speak to this man."

"I . . . I'm afraid that's impossible, y' lordship. He's down as a deserter. Disappeared from post last night. Hasn't been seen since."

Lord Darcy said nothing. He took the lantern from the captain and knelt down to peer closely at the footprints on the tunnel floor.

"I should have looked more closely," he muttered, as if to himself. "I've taken too much for granted. Ha! Two men—carrying something heavy. And followed by a third." He stood up. "This puts an entirely different complexion on the matter. We must act at once. Come!" He turned and strode back toward the castle cellar.

"But— What of the rest of the tunnel?"

"There is no need to search it," Lord Darcy said firmly. "I can assure you that there is no one in it but ourselves. Come along."

In the shadows of a dingy dockside warehouse a block from the pier where the Danzig-bound vessel, *Esprit de Mer*, was tied up, Lord Darcy stood, muffled in a long cloak. Beside him, equally muffled in a black naval cloak, his blond hair covered by a pulled-up cowl, stood Lord Seiger, his quite handsome face expressionless in the dimness.

"There she is," Lord Darcy said softly. "She's the only vessel bound for a North Sea port from Cherbourg. The Rouen office confirms that she was sold last October to a Captain Olsen. He claims to be a Northman, but I will be willing to wager against odds that he's Polish. If not, then he is certainly in the pay of the King of Poland. The ship is still sailing under Imperial registry and flying the Imperial flag. She carries no armament, of course, but she's a fast little craft for a merchant vessel."

"And you think we will find the evidence we need aboard her?" Lord Seiger asked.

"I am almost certain of it. It will be either here or at the warehouse, and the man would be a fool to leave the stuff here now—especially when it can be shipped out aboard the *Esprit de Mer*."

It had taken time to convince Lord Seiger that it was necessary to make this raid. But once Lord Darcy had convinced him of how much was already known and verified everything by a teleson call to Rouen, Lord Seiger was both willing and eager. There was a suppressed excitement in the man that showed only slightly in the pale blue eyes, leaving the rest of his face as placid as ever.

Other orders had had to be given. Captain Sir Androu Duglasse had sealed Castle Cherbourg; no one—*no one*—was to be allowed out for any reason whatever. The guard had been doubled during the emergency. Not even

My Lord Bishop, My Lord Abbot, or My Lady Marquise could leave the castle. Those orders came, not from Lord Darcy, but from His Royal Highness the Duke of Normandy himself.

Lord Darcy looked at his wrist watch. "It's time my lord," he said to Lord Seiger. "Let's move in."

"Very well, my lord," Lord Seiger agreed.

The two of them walked openly toward the pier.

At the gate that led to the pier itself, two burly-looking seamen stood lounging against the closed gate. When they saw the two cloaked men approaching, they became more alert, stepping away from the gate, toward the oncoming figures. Their hands went to the hilts of the scabbarded cutlasses at their belts.

Lord Seiger and Lord Darcy walked along the pier until they were within fifteen feet of the advancing guards, then stopped.

"What business have ye here?" asked one of the seamen.

It was Lord Darcy who spoke. His voice was low and cold. "Don't address me in that manner if you want to keep your tongue," he said in excellent Polish. "I wish to speak to your captain."

The first seaman looked blank at being addressed in a language he did not understand, but the second blanched visibly. "Let me handle this," he whispered in Anglo-French to the other. Then, in Polish: "Your pardon, lord. My messmate here don't understand Polish. What was it you wanted, lord?"

Lord Darcy sighed in annoyance. "I thought I made myself perfectly clear. We desire to see Captain Olsen."

"Well, now, lord, he's given orders that he don't want to see no one. Strict orders, lord."

Neither of the two sailors noticed that, having moved away from the gate, they had left their rear unguarded. From the skiff that had managed to slip in under the pier under cover of darkness, four of the Marquis' Own silently lifted themselves to the deck of the pier. Neither Lord Darcy nor Lord Seiger looked at them.

"Strict orders?" Lord Darcy's voice was heavy with scorn. "I dare say your orders do not apply to Crown Prince Sigismund himself, do they?"

On cue, Lord Seiger swept the hood back from his handsome blond head.

It was extremely unlikely that either of the two sailors had ever seen Sigismund, Crown Prince of Poland—nor, if they had, that they would have recognized him when he was not dressed for a state occasion. But certainly they had heard that Prince Sigismund was blond and handsome, and that was all Lord Darcy needed. In actuality, Lord Seiger bore no other resemblance, being a good head taller than the Polish prince.

While they stood momentarily dumfounded by this shattering revelation, arms silently encircled them, and they ceased to wonder about Crown Princes of any kind for several hours. They were rolled quietly into the shadows behind a pile of heavy bags of ballast.

"Everyone else all set?" Lord Darcy whispered to one of the Guardsmen.

"Yes, my lord."

"All right. Hold this gate. Lord Seiger, let's go on."

"I'm right with you, my lord," said Lord Seiger.

Some little distance away, at the rear door of a warehouse just off the waterfront, a heavily armed company of the Men-at-Arms of Cherbourg listened to the instructions of Chief Master-at-Arms Henri Vert.

"All right. Take your places. Seal every door. Arrest and detain anyone who tries to leave. Move out." With a rather self-important feeling, he touched the Duke's Warrant, signed by Lord Darcy as Agent for His Highness, that lay folded in his jacket pocket.

The Men-at-Arms faded into the dimness, moving silently to their assigned posts. With Chief Henri remained six Sergeants-at-Arms and Master Sean O Lochlainn, Sorcerer.

"All right, Sean," said Chief Henri, "go ahead."

"Give us a little light from your dark lantern, Henri," said Master Sean, kneeling to peer at the lock of the door. He set his black suitcase on the stone pavement and quietly set his corthainn-wood magician's staff against the wall beside the door. The Sergeants-at-Arms watched the tubby little sorcerer with respect.

"Hoho," Master Sean said, peering at the lock. "A simple lock. But there's a heavy bar across it on the inside. Take a little work, but not much time." He opened his suitcase to take out two small phials of powder and a thin laurel-wood wand.

The Armsmen watched in silence as the sorcerer muttered his spells and blew tiny puffs of powder into the lock. Then Master Sean pointed his wand at the lock and twirled it counterclockwise slowly. There was a faint sliding noise and a *snick!* of metal as the lock unlocked itself.

Then he drew the wand across the door a foot above the lock. This time, something heavy slid quietly on the other side of the door.

With an almost inaudible sigh, the door swung open an inch or so.

Master Sean stepped aside and allowed the sergeants and their chief to enter the door. Meanwhile, he took a small device from his pocket and checked it again. It was a cylinder of glass two inches in diameter and half an inch high, half full of liquid. On the surface of the liquid floated a tiny sliver of oak that would have been difficult to see if the top of the glass box had not been a powerful magnifying lens. The whole thing looked a little like a pocket compass—which, in a sense, it was.

The tiny sliver of oak had been recovered from the scalp of the slain man in the morgue, and now, thanks to Master Sean's thaumaturgical art, the little sliver pointed unerringly toward the piece of wood whence it had come.

Master Sean nodded in satisfaction. As Lord Darcy had surmised, the weapon was still in the warehouse. He

glanced up at the lights in the windows of the top floor of the warehouse. Not only the weapon, but some of the plotters were still here.

He smiled grimly and followed the Armsmen in, his corthainn-wood staff grasped firmly in one hand and his suitcase in the other.

Lord Darcy stood with Lord Seiger on one of the lower decks of the *Esprit de Mer* and looked around. "So far, so good," he said in a low voice. "Piracy has its advantages, my lord."

"Indeed it does, my lord," Lord Seiger replied in the same tone.

Down a nearby ladder, his feet clad in soft-soled boots, came Captain Sir Androu, commander of the Marquis' Own. "So far, so good, m' lords," he whispered, not realizing that he was repeating Lord Darcy's sentiments. "We have the crew. All sleeping like children."

"All the crew?" Lord Darcy asked.

"Well, m' lord, all we could find so far. Some of 'em are still on shore leave. Not due back 'til dawn. Otherwise, I fancy this ship would have pulled out long before this. No way to get word to the men, though, eh?"

"I have been hoping so," Lord Darcy agreed. "But the fact remains that we really don't know how many are left aboard. How about the bridge?"

"The Second Officer was on duty, m' lord. We have him."

"Captain's cabin?"

"Empty, m' lord."

"First Officer's?"

"Also empty, m' lord. Might be both ashore."

"Possibly." There was a distinct possibility, Lord Darcy knew, that both the captain and the first officer were still at the warehouse—in which case, they would be picked up by Chief Henri and his men. "Very well. Let's keep moving down. We still haven't found what we're looking for." *And there will be one Hell of an international incident if we don't find it*, Lord Darcy told himself. *His Slavic Majesty's Government will demand all sorts of indemnities, and Lady Darcy's little boy will find himself fighting the aborigines in the jungles of New France.*

But he wasn't really terribly worried; his intuition backed up his logic in telling him that he was right.

Nevertheless, he mentally breathed a deep sigh of relief when he and Lord Seiger found what they were looking for some five or six minutes later.

There were four iron-barred cells on the deck just above the lowest cargo hold. They faced each other, two and two, across a narrow passageway. Two bosuns blocked the passageway.

Lord Darcy looked down the tweendecks hatch and saw them. He had gone down the ladders silently, peeking carefully below before attempting to descend, and his caution had paid off. Neither of the bosuns saw him. They were leaning casually against the opposite bulk-

heads of the passageway, talking in very low voices.

There was no way to come upon them by stealth, but neither had a weapon in hand, and there was nothing to retreat behind for either of them.

Should he, Lord Darcy wondered, wait for reinforcements? Sir Androu already had his hands full for the moment, and Lord Seiger would not, of course, be of any use. The man was utterly incapable of physical violence.

He lifted himself from the prone position from which he had been peeking over the hatch edge to look below, and whispered to Lord Seiger. "They have cutlasses. Can you hold your own against one of them if trouble comes?"

For answer, Lord Seiger smoothly and silently drew his rapier. "Against both of them if necessary, my lord," he whispered back.

"I don't think it will be necessary, but there's no need taking chances at this stage of the game." He paused. Then he drew a five-shot .42 caliber handgun from his belt holster. "I'll cover them with this."

Lord Seiger nodded and said nothing.

"Stay here," he whispered to Lord Seiger. "Don't come down the stairs . . . sorry, the *ladder* . . . until I call."

"Very well, my lord."

Lord Darcy walked silently up the ladder that led to the deck above. Then he came down again, letting his footfalls be heard.

He even whistled softly but audibly as he did so—an old Polish air he happened to know.

Then, without breaking his stride, he went on down the second ladder. He held his handgun in his right hand, concealed beneath his cloak.

His tactics paid off beautifully. The bosuns heard him coming and assumed that he must be someone who was authorized to be aboard the ship. They stopped their conversation and assumed an attitude of attention. They put their hands on the hilts of their cutlasses, but only as a matter of form. They saw the boots, then the legs, then the lower torso of the man coming down the ladder. And still they suspected nothing. An enemy would have tried to take them by surprise, wouldn't he?

Yes.

And he did.

Halfway down the steps, Lord Darcy dropped to a crouch and his pistol was suddenly staring both of them in the face.

"If either of you moves," said Lord Darcy calmly, "I will shoot him through the brain. Get your hands off those blade hilts and don't move otherwise. Fine. Now turn around. *V-e-r-r-ry slowly.*"

The men obeyed wordlessly. Lord Darcy's powerful hand came down twice in a deft neck-chop, and both men dropped to the floor unconscious.

"Come on down, my lord," said Lord Darcy. "There will be no need for swordplay."

Lord Seiger descended the ladder in silence, his sword sheathed.

There were two cell doors on either side of the passageway; the cells themselves had been built to discipline crewmen or to imprison sailors or passengers who were accused of crime on the high seas while the ship was in passage. The first cell on the right had a dim light glowing within it. The yellowish light gleamed through the small barred window in the door.

Both Lord Darcy and Lord Seiger walked over to the door and looked inside.

"That's what I was looking for," Lord Darcy breathed.

Within, strapped to a bunk, was a still, white-faced figure. The face was exactly similar to that of the corpse Lord Darcy had seen in the morgue.

"Are you sure it's the Marquis of Cherbourg?" Lord Seiger asked.

"I refuse to admit that there are *three* men who look that much alike," Lord Darcy whispered dryly. "Two are quite enough. Since Master Sean established that the body in the morgue was definitely *not* related to my lord of Guernsey and Sark, *this* must be the Marquis. Now, the problem will be getting the cell door open."

"*I vill open idt for you.*"

At the sound of the voice behind them, both Lord Darcy and Lord Seiger froze.

"To qvot you, Lord Darcy, 'If either of you moves, I vill shoodt him through the brain,'" said the voice. "Drop de gun, Lord Darcy."

As Lord Darcy let his pistol drop from his hand, his mind raced.

The shock of having been trapped, such as it had been, had passed even before the voice behind him had ceased. Shock of that kind could not hold him frozen long. Nor was his the kind of mind that grew angry with itself for making a mistake. There was no time for that.

He had been trapped. Someone had been hidden in the cell across the passageway, waiting for him. A neat trap. Very well; the problem was, how to get out of that trap.

"Bot' of you step to de left," said the voice. "Move away from de cell port. Dat's it. Fine. Open de door, Ladislas."

There were two men, both holding guns. The shorter, darker of the two stepped forward and opened the door to the cell next to that in which the still figure of the Marquis of Cherbourg lay.

"Bot' of you step inside," said the taller of the two men who had trapped the Imperial agents.

There was nothing Lord Seiger and Lord Darcy could do but obey.

"Keep you de hands high in de air. Dat's fine. Now listen to me, and listen carefully. You t'ink you have taken dis ship. In a vay, you have. But not finally. I have you. I have de Marquis. You vill order your men off. Odervise, I vill kill all of you—vun adt a time. Understand? If I hang, I do not die alone."

Lord Darcy understood. "You want your crew back,

eh, Captain Olsen? And how will you get by the Royal Navy?"

"De same way I will get out of Cherbourg harbor, Lord Darcy," the captain said complacently. "I vill promise release. You will be able to go back home from Danzig. Vot goodt is any of you to us now?"

*None, except as hostages*, Lord Darcy thought. What had happened was quite clear. Somehow, someone had managed to signal to Captain Olsen that his ship was being taken. A signal from the bridge, perhaps. It didn't matter. Captain Olsen had not been expecting invaders, but when they had come, he had devised a neat trap. He had known where the invaders would be heading.

Up to that point, Lord Darcy knew, the Polish agents had planned to take the unconscious Marquis to Danzig. There, he would be operated on by a sorcerer and sent back to Cherbourg—apparently in good condition, but actually under the control of Polish agents. His absence would be explained by his "spells," which would no longer be in evidence. But now that Captain Olsen knew that the plot had been discovered, he had no further use for the Marquis. Nor had he any use for either Lord Darcy or Lord Seiger. Except that he could use them as hostages to get his ship to Danzig.

"What do you want, Captain Olsen?" Lord Darcy asked quietly.

"Very simply, dis: You vill order de soldiers to come below. Ve vill lock them up. Ven my men vake up, and de rest of de crew come aboard, ve vill sail at dawn. Ven ve are ready to sail, all may go ashore except you and Lord Seiger and de Marquis. Your men vill tell de officials in Cherbourg vhat has happened and vill tell dem dat ve vill sail to Danzig unmolested. Dere, you vill be set free and sent back to Imperial territory I give you my vord."

Oddly, Lord Darcy realized that the man meant it. Lord Darcy knew that the man's word was good. But was he responsible for the reactions of the Polish officials at Danzig? Was he responsible for the reactions of Casimir IX? No. Certainly not.

But, trapped as they were—

And then a hoarse voice came from across the passageway, from the fourth cell.

"Seiger? Seiger?"

Lord Seiger's eyes widened. "Yes?"

Captain Olsen and First Officer Ladislas remained unmoved. The captain smiled sardonically. "Ah, yes. I forgot to mention your so-brave Sir James LeLein. He vill make an excellent hostage, too."

The hoarse voice said: "They are traitors to the King, Seiger. Do you hear me?"

"I hear you, Sir James," said Lord Seiger.

"Destroy them," said the hoarse voice.

Captain Olsen laughed. "Shut up, LeLein. You—"

But he never had time to finish.

Lord Darcy watched with unbelieving eyes as Lord



Seiger's right hand darted out with blurring speed and slapped aside the captain's gun. At the same time, his left hand drew his rapier and slashed out toward the first officer.

The first officer had been covering Lord Darcy. When he saw Lord Seiger move, he swung his gun toward Lord Seiger and fired. The slug tore into the Yorkshire nobleman's side as Captain Olsen spun away and tried to bring his own weapon to bear.

By that time, Lord Darcy himself was in action. His powerful legs catapulted him toward First Officer Ladislas just as the point of Lord Seiger's rapier slashed across Ladislas' chest, making a deep cut over the ribs. Then Ladislas was slammed out into the passageway by Lord Darcy's assault.

After that, Lord Darcy had too much to do to pay any attention to what went on between Lord Seiger and Captain Olsen. Apparently oblivious to the blood gushing from the gash on his chest, Ladislas fought with steel muscles. Darcy knew his own strength, but he also knew that this opponent was of nearly equal strength. Darcy held the man's right wrist in a vise grip to keep him from bringing the pistol around. Then he smashed his head into Ladislas' jaw. The gun dropped and spun away as both men fell to the deck.

Lord Darcy brought his right fist up in a smashing blow to the first officer's throat; gagging, the first officer collapsed.

Lord Darcy pushed himself to his knees and grabbed the unconscious man by the collar, pulling him half upright.

At that second, a tongue of steel flashed by Lord Darcy's shoulder, plunged itself into Ladislas' throat, and tore sideways. The first officer died as his blood spurted fountainlike over Lord Darcy's arm.

After a moment, Lord Darcy realized that the fight was over. He turned his head.

Lord Seiger stood nearby, his sword red. Captain Olsen lay on the deck, his life's blood flowing from three wounds—two in the chest, and the third, like his first officer's, a slash across the throat.

"I had him," Lord Darcy said unevenly. "There was no need to cut his throat."

For the first time, he saw a slight smile on Lord Seiger's face.

"I had my orders, my lord," said Lord Seiger, as his side dripped crimson.

With twelve sonorous, resounding strokes, the great Bell of the Benedictine Church of Saint Denys, in the courtyard of Castle Cherbourg, sounded the hour of midnight. Lord Darcy, freshly bathed and shaved and clad in his evening wear, stood before the fireplace in the reception room above the Great Hall and waited patiently for the bell to finish its tally. Then he turned and smiled at the young man standing beside him. "As you were saying, Your Highness?"

Richard, Duke of Normandy, smiled back. "Even royalty can't drown out a church bell, eh, my lord?" Then his face became serious again. "I was saying that we have made a clean sweep. Dunkerque, Calais, Boulogne . . . all the way down to Hendaye. By now, the English Armsmen will be picking them up in London, Liverpool, and so on. By dawn, Ireland will be clear. You've done a magnificent job, my lord, and you may rest assured that my brother the King will hear of it."

"Thank you, Your Highness, but I really—"

Lord Darcy was interrupted by the opening of the door. Lord Seiger came in, then stopped as he saw Duke Richard.

The Duke reacted instantly. "Don't bother to bow, my lord. I have been told of your wound."

Lord Seiger nevertheless managed a slight bow. "Your Highness is most gracious. But the wound is a slight one, and Father Patrique has laid his hands on it. The pain is negligible, Highness."

"I am happy to hear so." The Duke looked at Lord Darcy. "By the way . . . I am curious to know what made you suspect that Lord Seiger was a King's Agent. I didn't know, myself, until the King, my brother, sent me the information I requested."

"I must confess that I was not certain until Your Highness verified my suspicions on the teleson. But it seemed odd to me that de Cherbourg would have wanted a man of Lord Seiger's . . . ah . . . peculiar talents merely as a librarian. Then, too, Lady Elaine's attitude . . . er, your pardon, my lord—"

"Perfectly all right, my lord," said Lord Seiger expressionlessly. "I am aware that many women find my presence distasteful—although I confess I do not know why."

"Who can account for the behavior of women?" Lord Darcy said. "Your manners and behavior are impeccable. Nonetheless, My Lady Marquise found, as you say, your presence distasteful. She must have made this fact known to her husband the Marquis, eh?"

"I believe she did, my lord," said Lord Seiger.

"Very well," said Lord Darcy. "Would My Lord Marquis, who is notoriously in love with his wife, have kept a *librarian* who frightened her? No. Therefore, either Lord Seiger's purpose here was much more important—or he was blackmailing the Marquis. I chose to believe the former." He did not add that Father Patrique's information showed that it was impossible for Lord Seiger to blackmail anyone.

"My trouble lay in not knowing who was working for whom. We knew only that Sir James was masquerading as a common working man, and that he was working with My Lord Marquis. But until Your Highness got in touch with His Majesty, we knew nothing more. I was working blind until I realized that Lord Seiger—"

He stopped as he heard the door open. From outside came Master Sean's voice: "After you, my lady, my lord, Sir Gwiliam."

The Marquise de Cherbourg swept into the room, her fair face an expressionless mask. Behind her came My Lord Bishop and Sir Gwiliam, followed by Master Sean O Lochlainn.

Lady Elaine walked straight to Duke Richard. She made a small curtsy. "Your presence is an honor, Your Highness." She was quite sober.

"The honor is mine, my lady," replied the Duke.

"I have seen my lord husband. He is alive, as I knew he was. But his mind is gone. Father Patrique says he will never recover. I must know what has happened, Your Highness."

"You will have to ask Lord Darcy that, my lady," the Duke said gently. "I should like to hear the complete story myself."

My lady turned her steady gaze on the lean Englishman. "Begin at the beginning and tell me everything, my lord. I must know."

The door opened again, and Sir Androu Duglasse came in. "Good morning, Y' Highness," he said with a low bow. "Good morning, m'lady, y' lordships, Sir Gwiliam, Master Sean." His eyes went back to Lady Elaine. "I've heard the news from Father Patrique, m'lady. I'm a soldier, m'lady, not a man who can speak well. I cannot tell you of the sorrow I feel."

"I thank you, Sir Captain," said my lady, "I think you have expressed it very well." Her eyes went back to Lord Darcy. "If you please, my lord . . ."

"As you command, my lady," said Lord Darcy. "Er . . . captain, I don't think that what I have to say need be known by any others than those of us here. Would you watch the door? Explain to anyone else that this is a private conference. Thank you. Then I can begin." He leaned negligently against the fireplace, where he could see everyone in the room.

"To begin with, we had a hellish plot afoot—not against just one person, but against the Empire. The 'Atlantic Curse'. Ships sailing from Imperial ports to the New World were never heard from again. Shipping was dropping off badly, not only from ship losses, but because fear kept seamen off trans-Atlantic ships. They feared magic, although, as I shall show, pure magic had nothing to do with it.

"My lord the Marquis was working with Sir James LeLein, one of a large group of King's Agents with direct commissions to discover the cause of the 'Atlantic Curse'. His Majesty had correctly deduced that the whole thing was a Polish plot to disrupt Imperial economy.

"The plot was devilish in its simplicity. A drug, made by steeping a kind of mushroom in brandy, was being used to destroy the minds of the crews of trans-Atlantic ships. Taken in small dosages, over a period of time, the drug causes violent insanity. A ship with an insane crew cannot last long in the Atlantic.

"Sir James, working with My Lord Marquis and other agents, tried to get a lead on what was going on. My

Lord Marquis, not wanting anyone in the castle to know of his activities, used the old secret tunnel that leads to the city sewers in order to meet Sir James.

"Sir James obtained a sample of the drug after he had identified the ringleader of the Polish agents. He reported to My Lord Marquis. Then, on the evening of Wednesday, the eighth of January, Sir James set out to obtain more evidence. He went to the warehouse where the ringleader had his headquarters."

Lord Darcy paused and smiled slightly. "By the by, I must say that the details of what happened in the warehouse were supplied to me by Sir James. My own deductions only gave me a part of the story.

"At any rate, Sir James obtained entry to the second floor of the warehouse. He heard voices. Silently, he went to the door of the room from which the voices came and looked in through the . . . er . . . the keyhole. It was dark in the corridor, but well-lit in the room.

"What he saw was a shock to him. Two men—a sorcerer and the ringleader himself—were there. The sorcerer was standing by a bed, weaving a spell over a third man, who lay naked on the bed. One look at the man in the bed convinced Sir James that the man was none other than the Marquis of Cherbourg himself!"

Lady Elaine touched her fingertips to her lips. "Had he been poisoned by the drug, my lord?" she asked. "Was that what had been affecting his mind?"

"The man was not your husband, my lady," Lord Darcy said gently. "He was a double, a simple-minded man in the pay of these men.

"Sir James, of course, had no way of knowing that. When he saw the Marquis in danger, he acted. Weapon in hand, he burst open the door and demanded the release of the man whom he took to be the Marquis. He told the man to get up. Seeing he was hypnotized, Sir James put his own cloak about the man's shoulders and the two of them began to back out of the room, his weapon covering the sorcerer and the ringleader.

"But there was another man in the warehouse. Sir James never saw him. This person struck him from behind as he backed out the door.

"Sir James was dazed. He dropped his weapon. The sorcerer and the ringleader jumped him. Sir James fought, but he was eventually rendered unconscious.

"In the meantime, the man whom Sir James attempted to rescue became frightened and fled. In the darkness, he tumbled down a flight of oaken stairs and fractured his skull on one of the lower steps. Hurt, dazed, and dying, he fled from the warehouse toward the only other place in Cherbourg he could call home—a bistro called the Blue Dolphin, a few blocks away. He very nearly made it. He died a block from it, in the sight of two Armsmen."

"Did they intend to use the double for some sort of impersonation of my brother?" asked the Bishop.

"In a way, my lord. I'll get to that in a moment.

"When I came here," Lord Darcy continued, "I of course knew nothing of all this. I knew only that my lord

of Cherbourg was missing and that he had been working with His Majesty's Agents. Then a body was tentatively identified as his. If it *were* the Marquis, who had killed him? If it were not, what was the connection? I went to see Sir James and found that he had been missing since that same night. Again, what was the connection?

"The next clue was the identification of the drug. How could such a drug be introduced aboard ships so that almost every man would take a little each day? The taste and aroma of the brandy would be apparent in the food or water. Obviously, then, the wine rations were drugged. And only the vintner who supplied the wine could have regularly drugged the wine of ship after ship.

"A check of the Shipping Registry showed that new vintners had bought out old wineries in shipping ports throughout the Empire in the past five years. All of them, subsidized by the Poles, could underbid their competitors. They made good wine and sold it cheaper than others could sell it. They got contracts. They didn't try to poison every ship; only a few of those on the Atlantic run—just enough to start a scare while keeping suspicion from themselves.

"There was still the problem of what had happened to My Lord Marquis. He had *not* left the castle that night. And yet he had disappeared. But how? And why?

"There were four places that the captain had not searched. I dismissed the icehouse when I discovered that people went in and out of it all day. He could not have gone to the strongroom because the door is too wide for one man to use both keys simultaneously—which must be done to open it. Sir Gwiliam had been in and out of the wine cellar. And there were indications that the tunnel had also had visitors."

"Why should he have been in any of those places, my lord?" Sir Gwiliam asked. "Mightn't he have simply left through the tunnel?"

"Hardly likely. The tunnel guard was a King's Agent. If the Marquis had gone out that night and never returned, he would have reported the fact—not to Captain Sir Androu, but to Lord Seiger. He did not so report. Ergo, the Marquis did not leave the castle that night."

"Then what happened to him?" Sir Gwiliam asked.

"That brings us back to the double, Paul Sarto," said Lord Darcy. "Would you explain, Master Sean?"

"Well, my lady, gentle sirs," the little sorcerer began, "My Lord Darcy deduced the use of magic here. This Polish sorcerer—a piddling poor one, he is, too; when I caught him in the warehouse, he tried to cast a few spells at me and they were nothing. He ended up docile as a lamb when I gave him a dose of good Irish sorcery."

"Proceed, Master Sean," Lord Darcy said dryly.

"Beggin' your pardon, my lord. Anyway, this Polish sorcerer saw that this Paul chap was a dead ringer for My Lord Marquis and decided to use him to control My Lord Marquis—Law of Similarity, d' ye see. You know the business of sticking pins in wax dolls? Crude method of psychic induction, but effective if the similarity is great

enough. And what could be more similar to a man than his double?"

"You mean they used this poor unfortunate man as a wax doll?" asked the Marquise in a hushed voice.

"That's about it, your ladyship. In order for the spells to work, though, the double would have to have very low mind power. Well, he did. So they hired him away from his old job and went to work on him. They made him bathe and wear fine clothes, and slowly took control of his mind. They told him that he *was* the Marquis. With that sort of similarity achieved, they hoped to control the Marquis himself just as they controlled his simulacrum."

My Lady Elaine looked horrified. "*That* caused his terrible attacks?"

"Exactly, your ladyship. When My Lord Marquis was tired or distracted, they were able to take over for a little while. A vile business no proper sorcerer would stoop to, but workable."

"But what did they do to my husband?" asked the Lady of Cherbourg.

"Well, now, your ladyship," said Master Sean, "what do you suppose would happen to his lordship when his simulacrum got his skull crushed so bad that it killed the simulacrum? The shock to his lordship's mind was so great that it nearly killed him on the spot—*would* have killed him, too, if the similarity had been better established. He fell into a coma, my lady."

Lord Darcy took up the story again. "The Marquis dropped where he was. He remained in the castle until last night, when the Polish agents came to get him. They killed the King's Agent on guard, disposed of the body, came in through the tunnel, got the Marquis, and took him to their ship. When Captain Sir Androu told me that the guard had 'deserted', I knew fully what had happened. I knew that My Lord Marquis was either in the vintner's warehouse or in a ship bound for Poland. The two raids show that I was correct."

"Do you mean," said Sir Gwiliam, "that my lord lay in that chilly tunnel all that time? How horrible!"

Lord Darcy looked at the man for long seconds. "No. Not *all* that time, Sir Gwiliam. No one—especially not the Polish agents—would have known he was there. He was taken to the tunnel after he was found the next morning—in the wine cellar."

"Ridiculous!" said Sir Gwiliam, startled. "I'd have seen him!"

"Most certainly you would have," Lord Darcy agreed. "And most certainly you *did*. It must have been quite a shock to return home after the fight in the warehouse to find the Marquis unconscious on the wine cellar floor. Once I knew you were the guilty man, I knew you had given away your employer. You told me that you had played cards with Ordwin Vayne that night; therefore I knew which vintner to raid."

White-faced, Sir Gwiliam said, "I have served my lord

and lady faithfully for many years. I say you lie."

"Oh?" Lord Darcy's eyes were hard. "Someone had to tell Ordwin Vayne where the Marquis was—someone who *knew* where he was. Only the Marquis, Sir Androu, and *you* had keys to the tunnel. I saw the captain's key; it was dull and filmed when I used it. The wards of the old lock left little bright scratches on it. He hadn't used it for a long time. Only *you* had a key that would let Ordwin Vayne and his men into that tunnel."

"Pah! Your reasoning is illogical! If My Lord Marquis were unconscious, someone could have taken the key off him!"

"Not if he was in the tunnel. Why would anyone go there? The tunnel door was locked, so, even, if he *were* there, a key would have to have been used to find him. But if he had fallen in the tunnel, he would still have been there when I looked. There was no reason for you or anyone else to unlock that tunnel—*until* you were looking for a place to conceal My Lord Marquis' unconscious body!"

"Why would he have gone to the wine cellar?" Sir Gwiliam snapped. "And why lock himself in?"

"He went down to check on some bottles you had in the wine cellar. Sir James' report led him to suspect you. Warehouses and wineries are subjected to rigorous inspection. Ordwin Vayne didn't want inspectors to find that he was steeping mushrooms in brandy. So the bottles were kept *here*—the safest place in Cherbourg. Who would suspect? The Marquis never went there. But he did suspect at last, and went down to check. He locked the door because he didn't want to be interrupted. No one but you could come in, and he would be warned if you put your key in the lock. While he was there, the simulacrum Paul fell and struck his head on an oaken step. Paul died. The Marquis went comatose.

"When I arrived yesterday, you had to get rid of the evidence. So Vayne's men came and took the bottles of drug and the Marquis. If further proof is needed, I can tell you that we found the drug on the ship, in restoppered bottles containing cheap brandy and bits of mushroom. *But the bottles were labeled Saint Couerlandt Michele '46!* Who else in Cherbourg but you would have access to such empty bottles?"

Sir Gwiliam stepped back. "Lies! All lies!"

"No!" snapped a voice from the door. "Truth! All truth!"

Lord Darcy had seen Captain Sir Androu silently open the door and let in three more men, but no one else had. Now the others turned at the sound of the voice.

Sitting in a wheelchair, looking pale but still strong, was Hugh, Marquis of Cherbourg. Behind him was Sir James LeLein. To one side stood Father Patrique.

"What Lord Darcy said is true in every particular," said my lord the Marquis in an icy voice.

Sir Gwiliam gasped and jerked his head around to look at my lady the Marquise. "You said his mind was gone!"

"A small lie—to trap a traitor." Her voice was icy.

"Sir Gwiliam de Bracy," said Sir James from behind the Marquis, "in the King's Name, I charge you with treason!"

Two things happened almost at once. Sir Gwiliam's hand started for his pocket. But by then, Lord Seiger's sword, with its curious offset hilt, was halfway from its sheath. By the time Sir Gwiliam had his pistol out, the sword had slashed through his jugular vein. Sir Gwiliam had just time to turn and fire once before he fell to the floor.

Lord Seiger stood there, looking down at Sir Gwiliam, an odd smile on his face.

For a second, no one spoke or moved. Then Father Patrique rushed over to the fallen seneschal. He was too late by far. With all his Healing power, there was nothing he could do now.

And then the Marquise walked over to Lord Seiger and took his free hand. "My lord, others may censure you for that act. I do not. That monster helped send hundreds of innocent men to insanity and death. He almost did the same for my beloved Hugh. If anything, he died too clean a death. I do not censure you, my lord. I thank you."

"I thank you, my lady. But I only did my duty." There was an odd thickness in his voice. "I had my orders, my lady."

And then, slowly, like a deflating balloon, Lord Seiger slumped to the floor.

Lord Darcy and Father Patrique realized at the same moment that Sir Gwiliam's bullet must have hit Lord Seiger, though he had shown no sign of it till then.

Lord Seiger had had no conscience, but he could not kill or even defend himself of his own accord. Sir James had been his decision-maker. Lord Seiger had been a King's Agent who would kill without qualm on order from Sir James—and was otherwise utterly harmless. The decision was never left up to him, only to Sir James.

Sir James, still staring at the fallen Lord Seiger, said: "But . . . how could he? I didn't tell him to."

"Yes, you did," Lord Darcy said wearily. "On the ship. You told him to destroy the traitors. When you called Sir Gwiliam a traitor, he acted. He had his sword halfway out before Sir Gwiliam drew that pistol. He would have killed Sir Gwiliam in cold blood if the seneschal had never moved at all. He was like a gas lamp, Sir James. You turned him on—and forgot to shut him off."

Richard, Duke of Normandy, looked down at the fallen man. Lord Seiger's face was oddly unchanged. It had rarely had any expression in life. It had none now.

"How is he, Reverend Father?" asked the Duke.

"He is dead, Your Highness."

"May the Lord have mercy on his soul," said Duke Richard.

Eight men and a woman made the Sign of the Cross in silence. ■

The fauna traps set up the previous day in the grasslands east of the Planetary Survey Station on Lederet had made a number of catches; but all of them represented species with which the two biologists of the survey team already were sufficiently familiar. Jeslin removed the traps, revived the captured animals from a safe distance with a stimulant gun, and shifted to a point a hundred and eighty miles northwest of the station, where he set the traps up again, half a mile apart. Here a tall forest spread over rolling hills, with stretches of dense undergrowth below; and the animal population could be expected to be of a somewhat different type.

Around midday, Jeslin had completed his preparations. He checked the new location of the traps on his charts, lit a cigarette and turned the Pointer back toward the station. He was a stocky, well-muscled man, the youngest member of the team, who combined the duties of wildlife collector with those of the team's psychologist. Privately, he preferred the former work, enjoying his frequent encounters with curious and beautiful beasts on his way to and from the trap areas. And if the beasts were of a new variety, there would be a quick, stimulating chase in the Pointer, a versatile vehicle equally capable of hunting down game through thickest growth and of flying up to five times its own weight in captured specimens back to the station in undamaged condition.

Today was uneventful in that respect. There was game afoot but Jeslin was in a reflective mood, inclined to observe rather than pursue it. The station's cages were well supplied, and the traps, in their new location, would fill them up again before the biologists had completed their studies of the present occupants. He covered much of the stretch skimming over the forest at treetop level, emerged from it finally at a point twelve miles north of the station.

This was arid bush country, the ground below dotted with thorny growth. The Pointer flew across it, small things darting away from its shadow, vanishing with a flick into the thickets. Presently, Jeslin turned on the communicator, tapped the station's call button. Lederet was nearly a month's travel away from the nearest civilized world; and small groups working on such remote out-worlds observed certain precautions as a matter of course. One of them was having every incoming vehicle identify itself before it arrived.

The screen lit up and the round-cheeked, freckled face of a middle-aged woman appeared in it. It was Ald, the team's dietician. She smiled pleasantly, said in an even voice, "Hello, Jeslin," went on in the same quiet, unemphasized tone, "Crash, machmen—"

The screen went blank.

Jeslin instantly reached out, grasped the Pointer's chase controls, spun the machine about and sent it racing back toward the forest. Flicking on the full set of ground- and

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## THE MACHMEN

Total co-operation and communication between men is a wonderful thing. Nothing like it!  
But it does, also, have certain slight flaws . . .

JAMES H. SCHMITZ

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air-search screens, he studied them briefly in turn. His heart was pounding.

There was nothing in sight at the moment to justify Ald's warning. But the word "crash," used under such circumstances, had only one meaning. The station had been taken . . . he was to keep away from it, avoid capture and do whatever he could to help.

Machmen—Ald had been able to bring in that one additional word before they shut her off. Jeslin knew the term. Human beings surgically modified, equipped with a variety of devices to permit them to function freely in environments which otherwise would be instantly deadly to a man lacking the protection of a spacesuit or ship. They were instrumented men: machine men—machmen. Jeslin had not heard of recent experiments of the kind, but there were fairly numerous records of transitions to the machman condition, carried out with varying degrees of success.

His mind shifted back for an instant to a report received several days before from the Navy patrol boat assigned to Lederet for the protection of the survey station and its personnel. The boat had been contacted by a small I-Fleet vessel, requesting permission to carry out limited mining operations on the planet. After checking with the station, permission had been given. The I-Fleets were space vagrants, ordinarily harmless; and the mining party might be able to provide valuable information about the planet, with which they were evidently quite familiar.

The mining ship had begun its operations in a dry lake bed approximately a thousand miles from the station. Presumably, if machmen had captured the station, they had come over from the ship. With a heavily armed patrol boat circling the planet, it seemed an incredibly bold thing to do. Unless—

At that moment, Jeslin saw the figure in the search screen. It was human, appeared naked at first glance. Stretched out horizontally in the air about a hundred feet above the ground, arms laid back along its sides like a diver, it was approaching from the right, evidently

with the intention of heading off the Pointer before the machine reached the forest.

And it was moving fast enough to do it . . .

Jeslin stared at the apparition for an instant, more in amazement than alarm. He saw now that the fellow was wearing trunks and boots and held some dark object in his left hand. Possibly the last was a flight device of some kind. Jeslin could make out nothing else to explain this headlong rush through the air. What did seem explained, he thought, was the manner in which the station had been taken. A handful of half-naked I-Fleet miners approaching on foot, apparently not even armed, would have aroused no concern there. The visitors would have been invited inside.

Jeslin glanced at the forest ahead, checked the search screens again. In the air far to the left were three tiny dots, which might be similar figures approaching. If so, it would take them several minutes to get here, and the Pointer would be lost in the forest by then. The machman moving up on the right apparently intended to attack by himself to prevent the escape—and that, Jeslin thought, was something he might turn to his advantage.

He drew a pack of plastic contact fetters out of a compartment, peeled off an eighteen-inch length, thrust it into his pocket. He patted another pocket on the right side of his jacket to make sure the gun he carried for last-ditch protection against overly aggressive Lederet wildlife was inside, then switched on the Pointer's stungun and turned the vehicle in a wide, swift curve toward the approaching machman.

The figure shot up at a steep slant before the gun could straighten out on it. In the screens, Jeslin watched it dart by perhaps two hundred yards overhead, come arcing down again behind the machine. He swung the Pointer's nose back to the forest, not more than a quarter of a mile ahead now, went rushing toward it, watching the machman close the gap between them, coming level with the ground a hundred yards away . . . then eighty . . . sixty . . .

The machman brought his left hand sweeping forward, the dark object held out in it. Jeslin braked hard. The Pointer, designed to change direction instantly to match the tactics of elusive game, pivoted end for end within its own length. As the stungun came around to the left of the pursuing figure, Jeslin pulled the trigger.

Caught by the outer fringe of the stunfield, the machman swerved sideways. The dark object—not a flight mechanism, after all, but some weapon—dropped from his hand. He went rolling limply on through the air, settling toward the ground.

The Pointer picked him up before he got there.

"My name," the machman said presently, "is Hulida. I'm aware of yours. It's quite possible, incidentally, that we've met before."

Jeslin glanced over at him. He'd fastened the fellow in the seat next to his own, wrists locked behind his back by a contact fetter, another fetter clamping a cloth

blindfold over his eyes, seat belt drawn tight. For the past minute or two, he had been giving indications of recovering from stunshock, and it was no surprise to hear him speak. But a casually polite introduction, Jeslin thought, was hardly what he'd expected to hear.

"If we have," he said dryly, "I don't remember the occasion."

The blindfolded head of the man who called himself Hulida turned briefly toward him. He was not large; beside Jeslin, he seemed almost slight. But the olive-skinned body was firmly muscled, gave an impression of disciplined strength.

"It's only a possibility," Hulida said. "We happen to have been graduated from the University of Rangier in the same year. My degree was in medicine."

"It seems regrettable that you didn't continue your professional career," Jeslin told him.

"Oh, but I did. I'm one of the results of a machman experiment, but I also had a considerable part in bringing that experiment to its remarkably successful conclusion."

Jeslin grunted, returned his attention to the search screens. Successful the experiment certainly seemed to have been. When he went out to free Hulida from the Pointer's snaring tentacles, he had expected to find at least some indications of the profound changes worked on a human body to enable it to pursue him through the air. But whatever the changes might be, they weren't outwardly visible. A hasty search of the man's few articles of clothing had revealed no instrument to explain such an ability either; but until Hulida acknowledged the fact, Jeslin hadn't been certain that Ald's description of the nature of the station's attackers was correct. Earlier work of that kind had produced shapes in which functional plastic and metal was obviously united with the necessary proportion of living flesh.

He looked at the clock in the instrument panel, checked the screens once more, swung the Pointer around toward a chart section due west of his present location, some three hundred miles away. Not once during the past twenty minutes while he was pursuing a constantly changing, randomly erratic course through the forest had one of the flying men appeared in the search screens. He could assume that for the present he had lost them. Meanwhile he had a prisoner who seemed willing to give him at least part of the information he wanted.

He said, "How many machmen are there on Lederet?"

"At the moment, about forty," Hulida said promptly.

"The rest of our group—there are a hundred and ninety-five of us in all—are on a spaceship which is approaching the planet and will reach it shortly."

"That hundred and ninety-five," Jeslin asked, "is the total number of those who were transformed into machmen in your experiment?"

"Not entirely. There were a number of deaths at first, before we learned to perfect our methods."

"What will the spaceship do when it runs into our patrol boat?"



Hulida laughed. "It will simply take the crew on board, Jeslin. What else? Naturally, we captured the boat before we attempted to capture the station."

Jeslin already had been almost sure of it. Three times during his flight through the forest he had attempted to signal the patrol boat, had received no response.

"How was it done?"

"We took the mining ship up and sent them a distress message," Hulida said. "There had been an accident—we had injured men on board. Obliging, they came to our help at once. When they set up a locktube, we released gas bombs in both ships. We don't breathe normally, of course. It was very simple."

He added. "But you need feel no concern for either the crew or your colleagues at the station. None of them has been harmed. That was not our intention."

"Glad to hear it," Jeslin said. "Now what's the purpose of this business? Apparently, your experiment resulted in an important scientific achievement. If it had been conducted openly, I would have heard of it. Why the secrecy? And why—" He checked himself. "How many deaths were there in the first stage of the experiment, while you were still perfecting your methods?"

The machman hesitated, said, "Fifty-two."

"I see. You weren't working strictly with volunteers."

"Of course not," Hulida said. "We were—and are still—a small group. The work was obviously dangerous, and none of us could be spared as subjects until the element of danger had been removed. But that was not the reason we worked secretly, published nothing after results were assured, and eventually left civilization together. After all, we need not have recorded those early failures."

"Then what was the reason?" Jeslin asked.

"Our realization that the machmen we were creating and presently would become is a higher order of being than the merely human one. At one stroke, he is rid of four-fifths of the body's distresses and infirmities. He can expect a vastly lengthened life span. He thinks more clearly, is less subject to emotional disturbances. He is tremendously more efficient on the physical level . . . independent of environmental circumstances as no ordinary human ever could be. And we are only at the beginning of this, the pioneers . . ."

"Jeslin, we did not become machmen in order to be better able to toil on airless worlds or in space for our benefit or that of others. We made the choice because it is the greater manner of living. We are Homo Superior, the mankind of the future. And the ranks of Homo Superior are not to be opened to any low-grade fool who can pay to have the transformation carried out on him. Neither do we intend to subject our plans to the manipulations of government. We are a select group and shall remain it. That is why we detached ourselves from the Federation."

"And that," Jeslin asked, "adds up to a justification of piracy? One would think a couple of hundred of machmen

geniuses might find it no more difficult to make a living in space than an ordinary I-Fleet composed of ordinarily competent human beings."

Hulida said, "Our purpose goes beyond looting the survey station, Jeslin. Its equipment and personnel, of course, are valuable prizes in themselves, and so, to a lesser extent, are the patrol boat and its crew."

Jeslin looked over at him. "The personnel—"

"The personnel," Hulida explained, "and the crew will be transformed into machmen, naturally. They have highly trained minds, experience and skills which we can use to good advantage. Their consent isn't required. Not all of those who are machmen now underwent the transformation willingly, but their objections vanished as their experiences made its advantages fully apparent to them. They are as loyal to the group and its goals now as any of the others. And so will you be."

Jeslin felt a surge of cold anger: Mind-conditioning, of course. And it could be done . . .

"But our plan goes much farther than that," the machman was continuing. "This is a matter which has been very carefully investigated and prepared, Jeslin. The immediate consequence of your transformation will be that you will resume your work here as if nothing had happened—and, in fact, nothing else will have happened. You will continue to return favorable reports on Lederet to your department in the Hub. Within a year, the decision will be made to open precolonial operations on the planet."

"That is what we want. Equipment and supplies will be moved out here on a scale otherwise unobtainable by a small group such as ours. And with it will come technicians and scientists from whom we can select further recruits to round out our ranks. We will work carefully and quietly, but when we leave the planet, it will be to go forever beyond the Federation's reach with everything we need to found our own machman colony."

Jeslin was silent a moment, asked, "Why are you telling me all this?"

"To make it clear," the machman said, "that we simply cannot allow someone who knows about us to remain at large here. The possibility that you would still be alive and in a position to interfere with our plans when the Hub shipments begin to arrive may be slight, but we aren't ignoring it. Every other member of the survey team was accounted for during the morning. If necessary, we could turn all our resources now for months on end to the single purpose of hunting you down."

"You're inviting me to surrender?"

Hulida said, "I'm appealing to your reason. You have the opportunity of participating voluntarily in one of mankind's greatest adventures. If you reject it, it may not be possible to avoid killing you."

"At the moment," Jeslin said mildly, "it seems that I have one of the group's more important members as my hostage."



Hulida shook his blindfolded head. "No one of us is important enough to stand in the way of the group's goals. The fact that I'm your prisoner will be given every consideration, of course. But if it becomes necessary, we will both die."

Jeslin's gaze shifted to the course chart above the panel. He studied it a moment.

"I won't argue," he remarked, "with your claim that being transformed into a machman is a better way to live or the coming way to live. Possibly it's both. It's your methods I object to."

"They are our methods out of necessity," Hulida said.

"Perhaps. I'll think about it. And since you seem to have presented your case completely now, I'll appreciate it if you keep quiet for a while."

The machman smiled, shrugged, remained silent. After some minutes, Jeslin slowed the Pointer's advance. There was a valley ahead, a wide, sandy river bed winding along it. His route led across the river. At this point, there was forest again on the other side, but there was no way he could avoid coming out from under the shelter of the trees for a distance of at least half a mile.

He had been watching the search screens constantly and did not think he was being followed. It would have been almost impossible for even a single machman to keep the fleeing Pointer in sight in the forest without coming into view occasionally in the screens. The sky was a different matter. Jeslin could not check for them there without showing himself above the forest. For all he knew, there were machmen directly overhead at the moment.

But he had to get over the river before the hunt for him became organized, and this was his best opportunity to do it. Now he could see sunlit patches of the valley ahead, between the trunks and undergrowth and he slowed the Pointer again. Prowl up to the edge of the open ground, he thought; then if there were no pursuers immediately in sight, make a quick dash across. It would be too bad if he was seen, but once he reached the forest on the other side of the valley, he should be able to lose them again . . .

He heard a sound from Hulida, an abrupt, soft intake of breath, looked over at him and saw the knotted jaw muscles, the tight, fixed grin of the machman's mouth. Immediately, almost before he could form a conscious thought of why he should do it, Jeslin was spinning the Pointer away from the valley, back into the forest, and slamming on speed.

Behind him, the forest crashed. In the rear search screen, he saw the thing sweep after him . . . a vertical torrent, fifteen feet across, composed of earth, brush, uprooted and shattered trees rushing into the air, sucked up by a tractor beam. Beyond it, a group of flying figures darted into the forest, fanned out.

In thick growth, Jeslin turned the Pointer left again, raced on, hugging the ground, for a hundred yards, swung sharply to the right. For perhaps a minute, he saw nothing

in the screens except the thickets the machine was slashing through. Then there was a glimpse of two machmen weaving around tree trunks above the undergrowth. The roar of the tractor beam had lessened, now grew stronger again. The Pointer flashed into another thicket.

"Useless, Jeslin!" Hulida was shouting. "They've found you and you can't shake them off!"

For a while, it seemed Hulida was right. The fliers couldn't match the Pointer's speed in the forest; they would be there for instants, coming down through the crowns, fall behind as Jeslin swerved off, and vanish again. But they could rise back up through the trees and overtake him in the open air, and were doing it. He didn't know how many they were in all, but half the time he seemed to be in momentary view of one or the other of them.

And the tractors followed the fliers. There must be at least two of the machines moving across the forest after him, guided by the flying scouts. Suddenly the roar of the beam would arise, shredding the growth as it rushed in towards him; sometimes a second one appeared almost simultaneously from the other side. Once he nearly ran the Pointer directly into one of the dark, hurtling columns of forest debris; as he slewed away from it, the vehicle shuddered as if it were being shaken apart, and Hulida uttered a short, hoarse cry.

And then everything was quiet again. The Pointer rushed on—a minute, two minutes, three, four; and no pursuer appeared in the screens. Jeslin saw a gully ahead, a narrow, dry water bed, dropped into it, moved along it a quarter of a mile until it turned into a deep, rocky ravine almost enclosed by dense undergrowth above. There he stopped the machine.

The timepiece in the instrument panel told him twelve minutes had passed since he reached the edge of the valley. He would have said he had been running from the tractors for nearly an hour.

He rubbed his sweating palms along his thighs, looked over at Hulida's slumped form. There was no particular satisfaction in knowing that the chase had unnerved the machman more than it had him.

"Now talk," he said unsteadily, "if you care to go on living. What happened?"

Hulida straightened slowly but did not answer at once. Then he said, speaking carefully and obviously struggling to recover his self-possession, "Several of the survey team members were given truth drugs and questioned as soon as we secured the station. They told us of the long-range transmitter which was to be used to call for help if the station was disabled or overwhelmed by a hostile force. When you were warned off and escaped, it was assumed that that was where you would try to go. The transmitter has been located and is, of course, being guarded. We ran into the group which was watching the route you were most likely to take."

Jeslin had a sense of heavy, incredulous dismay. He

hadn't expected that particular piece of information to get to the machmen so quickly. It had been the one way left open now to defeat their plans.

After a moment, he asked, "Where did those tractors come from?"

"They are part of our ship's equipment. The machines were sent ahead to help in your capture."

Jeslin grunted. "If one of the beams had touched us," he said, "there's a good chance we would have been torn apart before they made a capture! You're right about your group not caring who stands in the way when they're out to do something." He saw Hulida's cheeks go gray below the blindfold, added, "Just before they jumped us, you knew it was coming. You machmen have a built-in communication system of some kind—"

Hulida hesitated, said, "Yes, we do."

"How does it operate?"

"I could attempt to describe it to you," Hulida said, "but the description would have meaning only to another machman. The use of the system cannot be taught until it can be experienced."

"At any rate," Jeslin said, "your friends know we have stopped running and have settled down somewhere."

Hulida shook his head.

"I have not told them that." He managed a brief, shaky grin. "After all, Jeslin, I prefer to go on living . . . and there is no reason why either of us should die. You can do nothing more, and you've had a demonstration of what your life as a fugitive would be like. The group won't give up the hunt until they have you. You can calculate your final odds for yourself. But surrender to me—now—and all will still be well."

There had been a growing urgency in his voice. Jeslin watched him, not answering. The machman's mouth worked. Fear, Jeslin thought. More fear than Hulida should be feeling at the moment. His own skin began to crawl. Here at the bottom of the ravine, the search screens showed him nothing.

He reached out quietly, switched on the Pointer's stungun.

"Jeslin . . ."

Jeslin remained silent.

"Jeslin, there is no time to lose!" Hulida's voice was harsh with desperation. "I did not tell you the truth just now. I can conceal nothing from the group. There are multiple direct connections between the brains, the nervous systems, of all of us. Our communication is not wholly a mechanical process—we function almost as units of a group mind. They know you are hiding in the area and have been searching for you. At any instant—"

Jeslin turned the Pointer's nose upward, triggered the gun. The stunfield smashed up out of the ravine, the machine following it. Man-shapes swirled about limply among the trees like drifting leaves, and something came thundering along the floor of the gully toward the place where the Pointer had been hiding.

Then the nightmare chase began again . . .

An endless period later, Jeslin realized he was clear of the pursuit for a second time. He kept the Pointer hurtling forward on a straight line, staying below the trees where he could, but flicking through open stretches and over stream beds without pausing. Once the screen showed him two figures wheeling high against the sky; he thought they were machmen but was under cover again before he could be sure.

Then something smashed against the Pointer's engine section in the rear. Jeslin swung the machine about, saw a figure gliding away behind a massive tree trunk, sent it spinning with the stungun, turned again and rushed on. A minute later, there was a distant crashing in the forest; then silence.

The Pointer began to vibrate heavily, and presently the speed indicator dropped. Jeslin looked at the location chart, chewing his lip. His arm muscles ached; he was trembling with tension and fatigue. He found himself trying to urge the machine onward mentally, made a snorting sound of self-derision.

Then there was warm, golden sunlight ahead among the trees. Jeslin brought a folded black hood out from under the instrument panel, laid it beside him. He reached over and unfastened Hulida's seat belt. The machman sagged sideways on the seat. His mouth moved as if he were speaking, but he seemed dazed.

Jeslin brought the Pointer to the ground, turned off the laboring engine. He picked up the black hood, dropped it over his head, its lower folds resting on his shoulders. From within, it seemed transparent, showing a glassy glitter around the edges of objects.

He took his gun from his pocket, hauled open the side door and stepped out. Ahead something slid quickly through a sunlit opening in the tree tops. Jeslin sent two bolts ripping through the foliage behind it, reached back into the Pointer and hauled Hulida out by the arm. He swung the staggering machman around, started at a half-run toward the area of open ground fifty yards away, thrusting Hulida ahead of him.

"Jeslin—" It was a hoarse gasp.

"Keep moving! They'll have a tractor on our machine in a moment." He felt the figure lighten suddenly, warned, "Don't try to leave me! I'll blow your head off before you're ten feet away."

"You're insane! You can't escape now!"

Tractor beams roared suddenly among the trees behind them, and Hulida screamed. They stumbled through a thicket, out into the sunlight of a wide glade. Machman figures darted above the tree tops of the far side, two hundred yards away. Jeslin ripped the blindfold from Hulida's face, seized his arm again, ran forward with him into the glade.

From the center of the open area came a single deep bell note, a curiously attention-binding sound. Jeslin stopped, hurled Hulida forward, away from him. The machman rolled over, came swaying almost weightlessly to his feet.

The bell note sounded again. Hulida's head turned toward it. He went motionless.

Here it comes, Jeslin thought . . .

And it came. Under the shielding hood, he was experiencing it, as he had many times before, as a pulsing, dizzying, visual blur. Outside, wave after wave of radiation was rushing out from the animal trap concealed in the center of the clearing, a pounding, numbing pattern of confusion to any mind within its range, increasing moment by moment in intensity.

After ten seconds, it stopped.

Hulida slumped sideways, settled slowly to the ground.

A man-shape streaked down out of the sky, turning over and over, crashed into the tree tops beyond the glade.

Something else passed through the thickets behind Jeslin, sucking noisily at the earth, and moved off into the distance, dirt and other debris cascading back down into the trees behind it. A similar din was receding through the forest to the south. The tractors were continuing on their course, uncontrolled.

Overhead, Jeslin saw other machman fliers drifting gradually down through the air.

He moved forward, picked up Hulida and drew back with him out of the trap's range. It would reset itself automatically now for any moving thing of sufficient size to trigger its mechanisms.

He wasn't sure he would find anything left of the Pointer, but the beams hadn't come within fifty feet of it. As he came up, he heard the communicator signal inside. He put Hulida down hastily, climbed in and switched on the instrument.

The face of Govant, the team's geophysicist, appeared in the screen.

"Jeslin, what the devil's happened?" he demanded. "The machmen who took over the station all collapsed at the same instant just now! Ald says she's sure you caused it in some manner. They're alive but unconscious."

"I know," Jeslin said. "I suggest you disarm them and dump them into one of the cages."

"That's being done, of course!" Govant said irritably. "We're not exactly stupid. But—"

"You're yelling for help from any navy units around?"

"Naturally." Govant looked aside, away from the screen, added, "Apparently, we've just had a response! But it may be weeks before help arrives, and the machmen said they had a spaceship which—"

"Their ship won't be a problem," Jeslin said. "Get a few airtrucks over here, will you? I'll give you my location. In a rather short time, I'm going to have a great many machmen around to transport back to the station's cages."

Govant stared at him. "What did you do to them?"

"Well," Jeslin said, "for all practical purposes, I've blown out their cortical fuses. I walked one of them into a hypnoshock trap here, and it hit the others through him. I'll give you the details when I get back. At present, they're simply paralyzed. In a few hours, they'll be able to move again; but for days after that, they won't make any move that somebody hasn't specifically told them to make. By that time, we should have the last of them locked up."

He stepped out of the Pointer after Govant had switched off and went back to Hulida, mentally shaping the compulsive suggestions which presently would shut off the wandering tractors, round up the tranced fliers, and bring the captured patrol boat and the machman spaceship gliding obediently down to the planet. ■

## in times to come

*Next month we start Mack Reynolds' new serial—"Sweet Dreams, Sweet Princes." Which, for all its title, is anything but a sweet and placid story; its another of the Frigid Fracas series, and a tale of crosses. Not double crosses, or even quadruple crosses—but at least an octuple cross, and I'm not quite sure whether that isn't multiplied by some higher exponent.*

*Which, as you'll gradually begin to realize as you read this yarn, is the precisely necessary and inescapable necessity of a civilization that insistently maintains its belief in a politico-cultural theory that cannot work, necessarily must have an actual mechanism that does work, and will not acknowledge to its members that its fundamental structure is a lying delusion.*

*It's really quite simple, you see: In a delusion, only lies and fantasy are True! ■ THE EDITOR*

It stood, a starkly unglamorous bastion against the island in the waters of Lethe, hemmed by a high protective rampart. It was, Simon Piedmont observed with routine and silent candor, in desperate need of a paint job. He grinned, the wrinkles in his weathered face creasing back into the thinning sideburns; for his mind's ear resounded already with the indignant wailing and gnashing of budgetary molars that accompanied every minor expenditure, while inevitably missing the major ones. It would be simpler to replace the building itself than to dignify the old one with color.

"Shall I write out a chit for it?" Piedmont inquired of his four-footed companion. The great dog barked and tongued his hand moistly. He massaged the gray furry ears. "Requisition: One brand new Government House, with paint," he murmured. Skeet wagged his massive tail agreeably. "Or would you prefer to take care of it yourself, old friend? You have as much authority as I..."

**Sheol** Geniuses we can use—  
the steady, reliable, noncreative worker we can use.  
But somewhere in between there seems to be  
something else and deadly...

**Piers Anthony and H. James Hotaling**

ILLUSTRATED BY JOHN SCHOENHERR



Piedmont turned to glance upward at the curtained shape of his wife, peering down anxiously behind a fifth floor parapet. He waved, smiling as her head drew back in alarm at the infringement of regulations. This was a ritual of twenty years duration, but it still gave him a modified thrill to assert his independence of trivia.

He set out across the court toward the front gate. Skeet marched ahead, big wide paws touching the concrete silently, cold gray eyes and evil fangs belying his benevolent disposition. He was on duty and his job was not to promenade before the Ladies' Aid Society.

The guard came to attention briskly, resplendent in a green and gold uniform that shamed Piedmont's faded blues. The morning sun glinted from the glossy quintessence that was the man's helmet, and the rifle clattered sharply with the accents of a practiced "Present Arms" movement.

"Good morning, Dr. Piedmont," the guard said stiffly.

"Good morning, corporal," Piedmont replied, "Whiting, isn't it? You certainly look pretty today."

The corporal grinned, suddenly blond and boyish. "Fred Whiting, sir. I had to shape up for the old man . . . er, I mean, General Hostedder is pulling a surprise inspection today, so it's full dress."

Piedmont smiled. "Surprise, eh? Well, Fred, I won't embarrass your post with my presence for long. We old-timers aren't up to that sort of thing, as you can see."

Whiting flushed. "Oh, no, sir. You're one of the demons . . . I mean, you have to face Sheol. Everyone knows that a man like you has no time to fool around with uniforms. You have to be tough."

Piedmont kept a straight face, though flattered by the boy's obvious admiration. "You're interested in Sheol?" "Yes, sir! It's a real man's job."

Now Piedmont could smile. "In that case, Fred, per-

haps I can offer you a hint for that inspection. Tighten your rifle. I know you keep the woodwork loose deliberately, but on the island that rattle could give away your position and cost you your life. The general knows that."

Whiting reddened again. "Thank you, sir, I will."

"Now if you'll just crank open that gate, I'll be on my way."

Whiting blocked his path. "Sorry, sir—I haven't checked your equipment yet."

Piedmont restrained a fit of impatience. "My equipment is in order, corporal. However—"

"Regulations, sir," Whiting said apologetically, taking the miniature walkie-talkie and activating it. There was a crackle and pop; ". . . Loud and clear," it said.

Piedmont withdrew the small black needler from his concealed holster and passed it over next.

Whiting broke it open, frowning. "I'll replace this one, sir," he murmured.

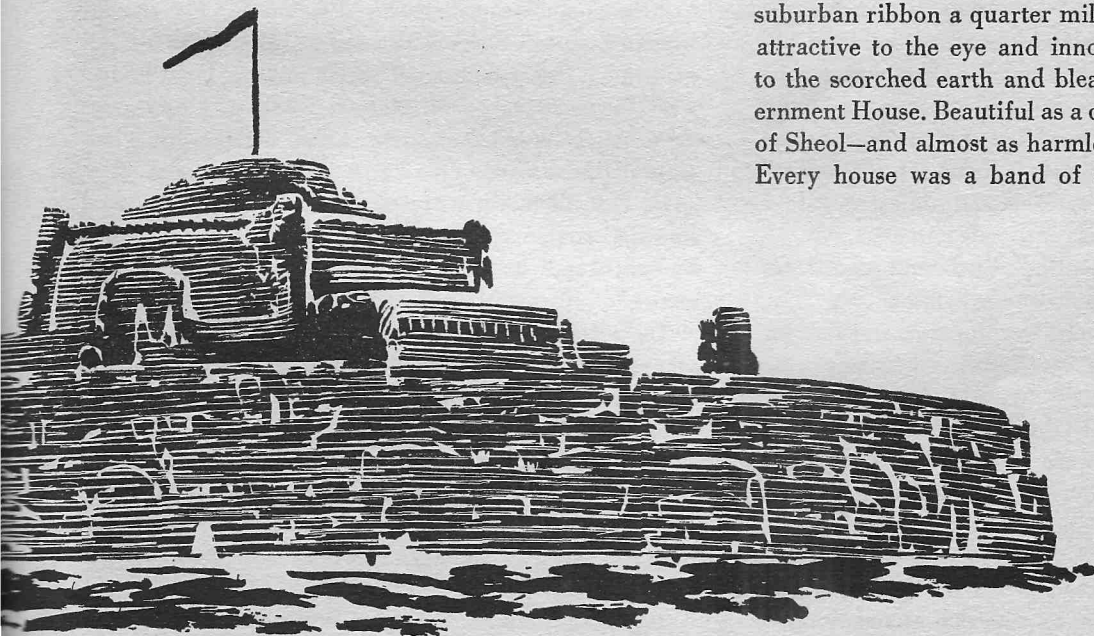
Piedmont realized with a shock that the point of one of the needles was broken. It would have been unserviceable in action. He was getting careless and the young man had caught him at it.

Whiting returned the equipment and squatted down before Skeet, who had been waiting patiently all this time. The dog growled menacingly.

"At ease, soldier," Piedmont cautioned sharply, and Skeet quieted while the corporal checked out the emergency beacon embedded in his collar.

Outside at last, Piedmont felt that momentary tightening of throat and stomach that twenty years' experience had not relieved. Skeet's company was suddenly more meaningful; the animal was deadly here in the open. In spite of his careless manner and shaggy uniform, Piedmont knew that his job was dangerous; that first step into Sheol proper brought an inevitable chill.

He adjusted his pack and set off toward the colorful suburban ribbon a quarter mile distant. The houses were attractive to the eye and innocent to behold, compared to the scorched earth and bleak walls surrounding Government House. Beautiful as a coral snake was the scenery of Sheol—and almost as harmless, when you left it alone. Every house was a band of exuberant pigment, every



town a spectrum of delight, a paradise of creativity; yet Sheol represented a subtle malignancy that the world preferred to isolate.

Piedmont consulted his map—a detailed representation updated weekly through aerial reconnaissance—and approached the address nearest to the Government area. He had a letter for Mr. Valor and another for his wife, both of whom he knew well.

The address was a vacant lot. Piedmont sighed: so it was going to be that sort of a day. Prefabricated housing was a marvelous convenience but it made it too easy for families to move without notice. They were gone without trace, apparently having timed their move to come just after the last flight. It would be pointless to ask the neighbors, who might or might not co-operate, and more important, it would be begging for trouble.

"Skeet!" he called, and the dog came quickly to heel. Piedmont took out his notebook and flipped the blank metallic pages rapidly. Coming across the one labeled "Valor," he held it to Skeet's sensitive nose. "Find," he said.

Skeet sniffed then circled the plot once. He took off down the street. Piedmont followed briskly, letting the dog choose the way. He could relax; Skeet would not lead him into danger. He closed the odorimeter and absent-mindedly tucked it back in its pocket. A simple tool—but effective.

Skeet led him to a relatively sedate house just a few blocks distant. There was a neat plaque over the door with the name "Smith" imprinted tastefully in purple. He looked inquiringly at the dog. Smith?

Skeet barked once and stood his ground. This was the house. Piedmont shrugged and withdrew a small swab from another pocket. He brushed over the names and addresses on the two letters and watched as they faded from view. Then, carefully, he printed the new names and address.

He inserted the reworked envelopes into a dummy bundle and took them up to the door. Skeet made no objections so he went ahead and knocked. He wanted to be certain that he had the right person before notifying HQ of the change.

The door opened immediately. "Hello, Mr. Piedmoss." It was old Mr. Valor, just as Skeet had indicated. "Have you got anything for us today?"

"Good morning, Mr. Smith." Piedmont fanned his bundle of letters, coming up with the original two. "Yes, there do seem to be a couple. One for you and one for the missus. From your son, Mr. Smith, if I make out the handwriting correctly."

Valor nodded and grabbed the letters quickly as though he were afraid Piedmont were about to take them away again. "Ronnie's a good boy, Mr. Piedmoss. A good boy. Even though he's always getting into trouble."

"Trouble?"

"You know. That government tax business. Why on earth would he want to take up with that sort of thing?"

Piedmont smiled. "He must be very good at figures," he suggested kindly. He refrained from pointing out that young Valor was nearly fifty years old and a District Tax Director. He worked on the mainland far from Sheol, and the notion that he was a wayward child was patently ludicrous. But this was not Piedmont's business; the letters would handle it.

The next few stops were uneventful. Toward mid-morning he followed Skeet through a gentle wood, where flowers lifted their fragrance in a blissful offering and sunlight dropped between the trees and over the leaves in speckled sections. Skeet sniffed around the trunks busily; but he was not given to fits of canine concupiscence and Piedmont let him run free. He paused to skuff his toe in the spongy brown dirt. There was no area like this within the Government stockade. For a moment he wondered whether something hadn't been lost when Government set up its defenses and retreated Inside . . .

The dog stopped short before a little candy house in the wood. It was an intricate replica of the Witch's Cottage, taken from the folklore of "Babes in the Wood." This was new—but at least the address was the same. The resident, a single woman, must have had considerable help to create such a mock-up. An alarming intelligence was evident in its design and craftsmanship. The cottage was beautiful—and it was perhaps a more fitting symbol of the nature of Sheol than his previous coral snake analogy.

He examined the quota for this address: a perfumed letter and a children's cookbook. He shuddered but he had no authority to withhold delivery. He was about to slip them quietly into the mail slot and depart but she was too quick for him. The door sprang open the moment he touched it, releasing a warm whiff of gingerbread from the interior.

"Oh, gooood morning, Sir Piedmont," the slender woman crooned. She was dressed in black from her tall conical hat to her floor-length skirt, and her laced bodice was disconcertingly full. Not all witches, it appeared, were hags. "Won't you come in for, uh, tea, Sir Piedmont?" she invited.

He cast about for a suitable excuse. But Skeet saved him the trouble with an ominous growl. "My dog isn't housebroken," he said hurriedly. "I'm afraid I really can't—"

The witch eyed Skeet, who curled a lip ever so slightly and returned her gaze steadily. "My, what an *interesting* familiar, Sir Piedmont," she exclaimed, not entirely without malice. She had, of course, seen the dog many times before, though not, perhaps, from her present vantage. "May I touch him?" she inquired and bent forward awesomely to run her tapering inch-long fingernails over his neck and back before Piedmont could voice approval.

Skeet permitted this intimacy, but did not budge from

his station at Piedmont's side. There was danger but apparently it was further inside the house. "You are certainly a magnificent kettleful, Sir Skeet," she said, straightening up at last, much to Piedmont's relief. He was glad his wife wasn't a mind reader, for there was far more magnificence in view than the dog. He made his apologies quickly and beat a retreat before the situation deteriorated.

Skeet seemed quiet after the crack about the state of his housebreaking and led the way to the next house. This was on the edge of the wild strip, and belonged to a gentleman who had decided late in life to be both botanist and biologist. His yard, if one could call it that, was a miniature jungle of animate, vegetative and dubious composition. Skeet advanced carefully, clearly inspecting every inch of the terrain. Halfway to the cabin he froze, the hair on his back stiff.

Piedmont stood silently for several minutes while the dog pointed. Suddenly Skeet lunged, plunging his narrow head deep into a yellow bush. He came up with a black horror in his mouth that wiggled and squealed virulently. It appeared to be some sort of thick worm, or snake, though the proportions were wrong for either.

There was a wail from the cabin. "Don't let that brute hurt her, Mr. Piedmont! She's only a baby!"

Skeet bristled, but did not close his jaws. He was trained to handle creatures of all types without damage to them or himself—or his master. "It isn't dangerous, is it?" Piedmont inquired, knowing that to this man even a rabid cobra wouldn't be considered "dangerous." But it was necessary to keep up appearances.

"No, no, Baby is harmless. Innocent. Please make that wolf let go, Mr. Piedmont."

He gave Skeet a brief command, and the dog reluctantly dipped his head and flipped the creature to the turf, snapping his head back quickly. The thing bounced up immediately, hissing with rage, but its tiny jaws missed the mark. Skeet growled, keeping his distance.

Mr. Templar bent and scooped the black body in his hands, caressing it with a finger. "Now, now," he whispered, "the nasty beast didn't hurt you, darling. Don't act so naughty." The bright beady eyes continued to glare balefully at Skeet, and bubbles of reddish moisture formed on the creature's teeth. A forked tongue flashed. Piedmont wondered just how "naughty" it was capable of being. He would have to tell Dr. Manner about Templar's latest creation; Skeet wasn't usually far wrong when it came to evaluating enemies.

He gave Templar his package and retreated.

Two hours later, Piedmont returned to the little wood for lunch. Skeet seemed uneasy, but did not protest. Something was bothering the great dog; there was an aura about this particular area this day that boded no good for a Government man. It was, however, too subtle to pinpoint.

They climbed a high grassy rise and settled down for

lunch. Piedmont opened his pack and hauled out their respective lunches, tossing Skeet's to him. Man and dog sat in the grass and fern at the top of the hill and chewed and absorbed the peace and silence of nature. From this height half the community was visible—the clustered trees at the base of the hill, the open fields and cultivated yards beyond, the white cross above the church in the distance superimposed on the placid ocean washing over the horizon. Nearby, to one side, was the dessicated disk that surrounded the gray stone fortress of Government House.

He pondered that. He was at the same height as the flag flying from the pinnacle of Government. His gaze upon the innumerable hues and designs of the dwellings of Sheol. It was beautiful, a picture postcard scene yet it represented an utterly alien way of life. He could hardly blame the inhabitants for distrusting Government personnel.

Piedmont gathered the papers and containers left from the meal and wadded them into a compartment of his pack. As he bent over it, something struck his shoulder, and Skeet growled. He reached to brush it off; then the pain hit him.

Through a red fog of agony he saw an arrow buried an inch deep in his right shoulder. He took hold of it with his left hand, but the pain magnified unbelievably, and his hand fell away helplessly. He lay down, letting the deltoid relax somewhat. Suddenly Skeet was there, the arrow in his teeth, and it was out.

He dressed the wound as well as he could with his first-aid kit, thankful that no artery had been hit, and injected himself with Novocain and an antitoxin. In a few minutes the pain subsided and he became aware of the world around him. Skeet was standing guard alertly; but whoever had shot the arrow must have fled.

Regulation required that he report the situation at once and wait for help before going farther. Another man would finish his beat.

Regulation be damned! He had had a perfect record for twenty years, and he wasn't going to let it be spoiled now. There would be no notation that he'd run into a situation he couldn't handle, or that his sector was out of control. He'd handle the matter himself, and make a full report later—perhaps.

"O.K., Skeet," he said. "Go find him." The dog bounded off, sniffing the fresh trail. Piedmont kept his right arm carefully limp and held the needler in his right hand, leaving the pack at the top of the hill. This was risky business, he knew. Maybe, he thought hazily, the drugs had distorted his judgment. Possibly there had been a coating on the arrow . . .

In moments they were at the edge of the wooded area that Skeet had been so leery of today. It must have been the attacker's lair. The dog led the way to a thickly vined gulch; young trees and brambles were tangled in an impenetrable wall. It would not be possible, in his present condition, to bring the fugitive out physically and

a direct challenge might bring forth only another arrow—more accurately aimed.

Piedmont didn't like to do this, still he had no real choice. "He's yours, Skeet. Go! Go get him!" The animal leaped as if struck, his tawny body a blur. The undergrowth wavered and subsided, no sight or sound betraying Skeet's progress. Well-trained dog, Piedmont thought with pardonable pride. And, rumor to the contrary, completely housebroken.

A minute passed; two. He had time to hope that it *was* a man in there, rather than a woman, though chivalrous sentiments were misplaced on Sheol. A sudden savage howl rent the air, making him jump in spite of himself; Skeet's scare-voice was effective. There was a crashing in the brush, followed by bitter barking, now one side, now the other, as canine herded human.

The bushes ahead parted and a man thrashed into sight. "Stop!" Piedmont cried, knowing that it would do no good but feeling the need to give the man a chance. The fugitive saw him and broke for open ground to one side. Reluctantly, Piedmont steadied his left hand and fired.

The needle missed, confirming his fears. He was a dead shot with his right but—Skeet burst out of the undergrowth, circling to block the man's escape, teeth bared cruelly. The man halted, watching the dog. He was beginning to lose his fear, now that he could see his opponent. He snapped an arrow from a shoulder harness and fitted it to his bow.

Piedmont shifted his weapon to the right hand and braced his elbow firmly. A little of the pain was coming through now, and his head was spinning; but he couldn't let Skeet get hurt. He fired, and saw the fugitive fall. That second needle, he remembered, would have been the defective one—if young Corporal Whiting hadn't been alert.

He went to the unconscious figure, removed the needle and pulled him, awkwardly, over onto his back. It was not a man but a boy, twelve or thirteen years old. He took out the odorimeter and opened to a special page, pressing the boy's limp hand against it for future identification. Later, they would process the fingerprints from the same plate but the smell was most important at the moment, for Skeet's benefit.

He rubbed the dog's shaggy head, accepting a couple of good licks in return, while waiting for the boy to recover consciousness. The needle's effect was brief, intended only to allow a few minutes to gain control over an unruly customer, and wearing off harmlessly. Piedmont was glad to get the rest, before beginning interrogation.

The boy turned out to be Larry Jones, from an adjoining sector. That explained why Piedmont hadn't recognized him and restored his confidence in his memory for faces. The boy hated all Government men and his parents burned their mail without reading it. "Them letters ain't

written by real folks nowadays," Larry said disgustedly. "I seen one, once, and it was all full of headshrinker's talk. Suttle like, so's the poor dopes didn't know what was being done to 'em. Makin' 'em want to leave the island and go to work for the Guvmint. Just brainwashing."

Piedmont watched the boy closely. "Do you really believe that, son?"

Larry curled his lip scornfully. "Think I'm stupid or somethin'? I read that there letter myself." He looked around, seeking a route of escape, but Skeet growled warningly. "And you, you Guvmint flatfoot—you give 'em them letters. On purpose."

Piedmont nodded thoughtfully. The lad was uncomfortably close to the truth. He would have to be taken to Government House for indoctrination. But not right away; not until he was ready. "So you designed a special house for one of my recipients. Her part of the bargain was to set a little trap for me . . ." he said slowly.

Larry's head snapped around. "How'd you know?" "Educated guess. There was genius in that cottage design, but that woman was never one to make a play for a Government man. There had to be someone with intelligence behind it—yet without sufficient experience to work out a competent plan."

"That's what eddication does for you, huh?"

"That's what it does," Piedmont said, throwing out the bait. Larry didn't like being outsmarted and once he realized that there were tricks of learning he couldn't get outside of Government House, he'd be ready to listen to reason. It would take time; but he was hooked already.

"It's not so bad in Government House," he continued. "You feel that those people are out to get you, Larry? They're not. They're only trying to stay away from you because they're afraid of you. They don't understand your type of mind. They believe that everyone on Sheol is unbalanced." Even while enjoying the island's products, Piedmont added silently; a best seller, a beautiful if disturbing play, not to mention the soaring structures in which a good share of the world's population worked, lived and played.

The boy's brow furrowed. "They think we're nutty?" Piedmont watched him steadily, keeping his hand unobtrusively on the needler. Larry's eyes met his, and slowly, a corner at a time, Piedmont cracked a smile. The boy responded uncertainly and Piedmont's broadened. Suddenly they were both laughing uproariously.

"They think *we're*—" Larry choked and burst into mirth again. "Can you beat that!" Skeet cocked an ear, perplexed.

Not perplexed. The dim throb of a police lift was audible, approaching. Skeet had heard it first.

"Better get out of here in a hurry, Larry," Piedmont said. "That's the G's."

"You mean you ain't turnin' me in?"

"To the nuts?" Piedmont said scornfully. "You crazy or something?" They laughed again and Larry got un-



steadily to his feet. "Pay me a visit sometime," Piedmont called after him. "On the hill, for lunch. And leave your arrows behind!"

The boy waved and was gone.

In moments the boat landed, blowing dirt and dry leaves from beneath. The vents cut off and a uniformed trooper stepped out.

"Well, if it isn't Corporal Whiting," Piedmont called cheerily. "What brought you way out here?"

Whiting eyed him with concern. "Your beacon stayed in one place so long I was afraid—"

"Corporal, you know I would have called in if there'd been any trouble." Skeet wagged agreement.

"Sure," Whiting said soberly. "But perhaps I'd better bandage that arm before you lose any more blood . . . sir."

Piedmont glanced at the rich red wound and relented. "Just as well you came," he said. "There did happen to be a little . . . accident. But Skeet had everything under control."

Whiting got busy with surprising competence, removing the ineffective pad and rebandaging the shoulder. "Dr. Piedmont," he began without interrupting his medications, "how long does it take to . . . I mean the training?"

"To be Outside Man at the Lotus Works?" Piedmont finished. "Let me see now. It's been a little while and it doesn't get any easier. But as I remember, there's two years of pre-med—I'd say you've already had most of that—a year of clinic work, four years of psychology, sociology, biology and physiology. There's a smattering of legal training and a dash of history, one or two courses in anthropology and . . . oh, I almost forgot. Three months of survival training." He turned to study the younger face seriously. "All in all, it takes about eight years of good, hard work. Think you're up to it?"

"I think so, sir. I'm due for discharge in eight months and I'm not planning to re-enlist. I don't hanker for the mainland, either. There's no challenge, no . . . well, I just think Sheol is the place for me. To work, I mean. As you do, sir."

Piedmont's face became a series of deep lines, reflecting the time and heart he had invested in his job. "There is certainly challenge. You'd be surprised at some of the little problems I encounter in a normal day's work . . ."

"No doubt," Whiting murmured, putting the finishing touches on the bandage.

Piedmont smiled tiredly. Now that he could afford to ease up, he knew that he was close to unconsciousness. "You've got to realize that accidents will happen. I mean accidents of classification, which lead inevitably to the more physical kind. It all goes back to the problem of society. We've worked everything out so that it fits neatly, except for a few loose ends. Sometimes an unscheduled string comes untied, and then there is a repercussion."

Whiting helped him to his feet. "You'll get a nice long rest, sir. We'll have a replacement pick up your pack—"

Piedmont took his seat in the lift, still smiling. "You don't understand what I'm saying now, but you will if you take the training. You see, there are two major qualities of civilization. There's what civilians call intelligence, and the military thinks of as savvy, while the psychologists refer to it as learning ability. It all adds up to the same thing—plain old common sense. Some people have it in greater abundance than others. The other quality is initiative—leadership to the army; creativity to the psych men. To me it's nonconformity: simple cussedness. Two qualities—and if you have both, you're a Government man. If you have neither, you choose a military career. If you have brains but no imagination, there are a number of specialized slots available.

"But suppose you happen to have an irrepressibly creative mind without the intellect to control it? For you there is no slot. You have the urge to break loose, but lack the knowhow to get away with it. Society can do nothing for you or with you—but you are *not* insane. You simply don't fit."

Whiting brought the lift down in the Government courtyard and cut the jets. "I never thought of it that way."

"Most people don't—particularly the ones in that very situation. There are many of them and it would be impossible and unfair to institutionalize them all. So society gathers up these loose ends and puts them on an island by themselves, where they can be forgotten. Government provides the essentials of life and lets them run their own affairs. Their society is a miraculous and wonderful thing and quite harmonious with the original meaning of the term 'Sheol'—place of the forgotten . . ."

Whiting helped him out of the lift. "Er, doctor . . . are you planning to make a report on your . . . accident?"

"I'd prefer to call it a little episode of recruitment," Piedmont said. "When someone turns up out there with both intelligence and independence, he's bound to be a misfit in misfitland. A prime candidate for Government service. Sometimes there's a little initial misunderstanding . . ."

Whiting capitulated. "All right, sir . . . nothing happened."

Piedmont clapped him on the shoulder, somewhat ineffectually. "You must see, Fred, that it takes an individualistic sort to handle conditions on Sheol. The kind of man who can bend the regs a little when he sees that they don't apply—or who will take a police lift out when there is no call. See what I mean?"

Whiting nodded dubiously.

"And most important of all—remember that in spite of all the glamour, the fancy rank and privileges, in the end I am nothing but a mail carrier. That's my job—just a postman." ■

# sleeping planet

Conclusion.

With two hundred years of Hollywood's and TV's best efforts to draw on, and a world of robots to carry them . . . who says ghosts aren't a real and deadly menace on the occupied planet Earth?

**WALTER R. BURKETT, JR.**

Illustrated by Kelly Freas

## SYNOPSIS

*In its so-far indecisive war with the Terran Federation, the Llralan Empire's Supreme Council has finally realized that it is getting nowhere by frontal assault and has decided to try the back door, gambling a battle fleet on a seemingly preposterous scheme dreamed up by Martak Sarno, an obscure provincial governor, and hinging on a new and unprecedented weapon—a toxic extract of a carnivorous plant that induces a prolonged “sleep” in Terrans.*

*The plan, upon being put into effect, has gone like clockwork—the three billion some-odd inhabitants of the Terran home system have, with ten exceptions, collapsed more or less simultaneously into unconsciousness, Sarno's ships have landed and his troops have deployed.*

*Among the ten exceptions are Bradford Donovan, London truck driver, and James Rierson, Atlanta attorney. Donovan, captured early in the proceedings, has pro-*

*ceeded to vent his ire by relating tales of the bloodthirsty ghost of his long-dead grandfather to his superstitious guards, thereby unwittingly offering an explanation—however farfetched—for the unexplained destruction of Scout-Flit S-90980 in Georgia by the uncaptured and unsuspected Rierson.*

*Sarno, knowing Donovan of old, is tempted to wholly discredit his gibberish, but nevertheless sends Security Chief Drelig Sjilla, head of the fleet intelligence section and attached to the elite Corps of Mockers, to attempt to win Donovan's confidence and discover just what prompted him to start spinning such yarns. Sjilla fails as Donovan realizes what is going on and penetrates his cover story, and then drops the subterfuge as a report is received stating that the Spook of Baxter has been cornered. The flivver upon which Donovan and Sjilla were heading for Sarno's flagship is then diverted so that Sjilla may witness the Spook's capture. Donovan is backed against a wall while the flivver goes aloft to participate*



in the attack and Sjilla converses with the officer, Vargir Zowal, in charge of operations. He considers making a break for it, discards the notion and bitterly resigns himself to watching the slaughter of a fellow Terran.

Rierson, despite desperate efforts to elude the closing trap, has been cornered in a furniture store and Zowal has tried by loud-speaker to convince him that resistance is useless and a waste of time—he will die, and his dying will prove nothing. When he makes no reply the Llrallans attack. He manages to beat back several thrusts, finally escapes the tightening noose as too many attackers, crowding into the smoke-filled room, start shooting at shadows and at one another. Intimidating a Llrallan airman, who addresses him as “Gremper” and who seems to consider him some sort of berserk phantom, he escapes by air to the north, determining to learn more about this “Gremper” business at the earliest possible date.

Sjilla, pursuing his investigations into the cause of the Unaffecteds—Terrans who didn't sleep—finds a connecting link and follows it to Venus while his second-in-command, Underchief Blalir, seeks the identity of the Spook. Both are successful: the perplexing question of how those who had never previously come into contact with the toxin could be immune is explained, and the Spook stands revealed for who he is, James Rierson, nephew of Daniel, another Unaffected. Meanwhile a Delegation of top Federation officials has arrived to check the veracity of Sarno's claims to total dominance, and to negotiate terms. After a mutual exchange of threats and insults, Sarno sends them off on a tour designed to eloquently point up his stranglehold, then hears Sjilla's reports on the Spook of Baxter, Gremper and the Unaffecteds, and O.K.'s the mocker's proposed plan for disposing of Rierson and thereby ending their problems. Toward this end Sjilla, with Donovan, Rierson's uncle, and two other Unaffecteds in tow, goes to Atlanta to set a trap.

James Rierson, with the pressure off him for once, has been contemplating his next course of action, and decides he needs more information. Interrogating his captive in a way calculated to play upon his fears of the supernatural, he learns just who “Gremper” is, and of the man who invented him, Bradford Donovan. While he is still in doubt as to just how this knowledge should be put to work he is rounded up by a Terran salesman-class robot and marched at gunpoint to its master-brain, located in a department store. Here he is told that the robots of the solar system can no longer tolerate the inroads of the aliens, and yet are powerless to stop them. Informed that he is the only sentient human to be turned up after an intensive search of three planets, he is then asked to give them instructions on dealing with the aliens.

Being more than willing to oblige, he proceeds to draft rough plans for offensive measures designed to convince the Larrys that, in truth, the undead are rallying to the colors, with robots to play the part of ghosts. He sets the robots of “Charlie”—the department store master-brain—against the largest enemy installation in Atlanta to test

the effectiveness of his ideas—the same installation to which Sjilla had adjourned with his prisoners to lay his trap—and thus beats the Security Chief to the punch. In the ensuing confusion, Daniel Rierson escapes while Sjilla, reacting swiftly, bluffs his way clear of the attacking robots, taking Donovan, the other two Unaffecteds, Lieutenant general Quiror, Colonel Visstor and two troopers with him. James Rierson, observing the action via viewscreens and ground radar from Charlie's control room, notes the escaping party and sends a robot squad after them, but too late. Thoroughly miffed that his “ghosts” ended up in a vicious firefight instead of putting the Llrallans to ignoble retreat without a shot being fired, he is scarcely heartened to learn that a robot has discovered a sentient Terran wandering through the streets.

The wanderer turns out to be his uncle, who fills him in on those details he lacks. Sjilla and his party have gone to ground, but the robots track them down in short order and stampede them into a neatly-arranged box. Sjilla finally runs out of tricks, going down under the stun guns of the robots.

With sudden and violent cracks appearing in his seemingly perfect invasion, Sarno calls back the Federation tour and executes two thousand Martian villagers, as much to salve his own hurt feelings as to rattle the Terrans, and tells them that unless, as a show of good faith, twenty Terran battle-squadrons are in Llrallan hands within a Terran week, the entire population of Atlanta will suffer the same fate. The Terran admiral cracks his confident facade but there is no follow-up; Ryan Garcia, Federation senator and understood spokesman of the Delegation is too shaken by the revelation that, unless the Federation plays ball, Atlanta is the next one to go—the senator's wife and children are interned in Atlanta.

Sarno sends them on their way to inform the Federation of his demands, and is alone. Mulling recent happenings, he realizes that things seem to have taken on a life of their own—that he has set a chain of events into motion and now, like it or not, he's just another passenger along for the ride. Sjilla, his good right arm, gone—not so much as a charred corpse remains—and four Unaffecteds unaccounted for. And one of them is Donovan—Donovan! That name has come to represent something akin to the working of Fate—something inscrutable and unstoppable. In his heart he knows he has not heard the last of Bradford Donovan. And now Sjilla, the only man who ever came close to giving Donovan pause, was past all recalling.

Sarno felt like weeping.

### PART III

#### XXIV

“Repeat your instructions,” James Rierson said.

“Yes, sir,” responded the Nairobi master-brain. “Pre-

cisely at nine p. m., local time, the android fashion manikins are to commence their infiltration. Fifteen minutes are to be allowed for them to get into position before the 'open fire' order is given. Stunguns only; no firearms. As soon as all the aliens are unconscious the androids are to leave, the warehousemen are to carry away the human females and the salesmen are to carry out their assignment and turn off all lights."

"And then?"

"And then, sir, the previously-positioned projector-robots are to begin their solido-image projections."

"Very good. How long will the operation take?"

"Twenty-five minutes from commencement of infiltration to Lights Out. As I understand it, the projections are to continue until they evoke some response from the enemy, and then cease completely."

"You understand correctly. Carry out those orders to the letter. If you run into any unforeseen event, have the Casa Blanca ECC put you in immediate voice-contact with me."

"Yes, sir." A distant relay thudded. Contact was broken.

"That makes fifteen cities," said the New York ECC. "Atlanta has already seen limited action—that makes sixteen. There are many more; their master-brains want action, too."

"They'll get their action—all the action they can handle. But they'll have to be patient."

"They cannot be patient; there are human lives involved."

"I know that—and they'll still have to be patient."

"The patience would not be necessary," the ECC pointed out, "if you would have done with this shilly-shallying and meet the problem head-on." Its voice became persuasive. "Turn us loose; do not hold us back. Let us arm ourselves and deal with them all as Charlie dealt with that one encampment. Let us teach these impertinent aliens the penalty for interfering in human affairs."

"If I did, they'd then proceed to teach *you* the penalty for attempting too much, too soon," Rierson snapped. "Now be quiet or I'll order you to dismantle yourself and throw all your components in the East River."

"Such an action would, for a number of reasons, be quite impossible," replied the ECC frigidly.

"*Nothing* is impossible." He broke contact, leaving it to stew a while.

"That's telling him," Michael Harris applauded from the doorway. "Yessirree, *that's* telling him."

Rierson leaned back in the control chair, grinned. "That blasted machine can really get me going sometimes. You ready to take over here?"

"Ready." He burped pleasurably. "Charlie, your robo-chefs set a mighty fine table."

"Thank you, sir."

"Don't thank *me*," Harris said as he eased his corpulent contours into the seat just vacated by Rierson. "I

should thank *you*. That's the first decent meal I've had since this whole slambang started." He looked at Rierson. "Bradford would like to see you in the subbasement. Says he has several items that might be of interest to you."

"On my way . . . Don't let New York bully you into anything we might regret."

"Not me." He stretched luxuriously. "I might just catch forty winks. The escalators are running now, by the way. Unless you simply want the exercise, I recommend them highly."

The subbasement was a whirl of activity; robots scurried to and fro, bringing booty captured at Quiror's Pen down from the ground-level warehouse and stacking it in orderly fashion against the housing of the reactor that was Furnestine's emergency power source. Lined along the far wall with military precision were the fifty sleeping Terrans carried away from the Pen; huddled in a corner were the Lralan prisoners, including the mocker, guarded by a trio of warehousemen with flamers. Out of respect for Sjilla's caginess and his human appearance, Dan Rierson sat nearby with a rifle across his knees.

James Rierson found Donovan sitting on a heap of salvaged Lralan equipment, holding something in his hands.

"How'd it go with the robots?"

He gestured. "The usual griping from New York, but the others proved very eager to co-operate."

"Good." The stocky man exhibited a black-metal cube not much larger than a children's building block and about the same weight, from the way he handled it. "Know what this is?"

"No."

"I didn't think so. If you had, you'd have been a little better informed on just what Larry was up to."

"How?"

Donovan turned the cube over, revealing several tiny buttons, a tiny knob and an inset bulb glowing bright orange. He prodded one of the buttons with a thick forefinger, then offered it to Rierson.

"Listen."

He could now see a grid in one surface of the cube—the one directly opposite the buttons. Gingerly, he held it near his ear. After a moment he took it down. Voices—Lralan voices, whispering out of the little black box!

"You don't have to act like a Tordig witch doctor seeing his first cigarette lighter," Donovan said humorously. "Well . . . what did you hear?"

"Lralan voices!"

"Naturally—but what were they saying?"

"I don't know—they were talking too fast. I think I did hear something that sounded vaguely like 'Atlanta' once or twice, though."

"You did."

Rierson handed the gadget back. "What *is* that thing, anyway?"

"The Lralan soldier's equivalent of your friendly

morning newspaper—partisan, of course. His friendly voice from home—from religious services to popular music, with heavy doses of propaganda and indoctrination flaptrap inbetween. The *Sulis-su-Banussen*—the Voice of Empire. What you were hearing right now was what you might call the fleet news.”

“You mean they’re actually telling what happened here?”

“I didn’t say that.” Donovan held the cube to his ear, his face somber.

“Then what?”

“The *Sulis-su-Banussen*, as a matter of course, is naming the next town whose occupants will be exterminated as an example to the Federation Delegation, unless certain obligations are met. A Martian village, it appears, was the first to go.”

“Strange the Martian ECCs didn’t set up a howl,” Rierson said. “What obligations?”

“Not so strange, perhaps—a lot of those Martian villages don’t have so much as a single master-brain. But about the obligations . . . Sarno seems to think the Federation owes him twenty battle-squadrons in a pretty package with a pink bow on it—and unless he gets said package within five days, a major city is going to die.”

Rierson felt the blood drain away from his face. “What city?”

Donovan shrugged. “Atlanta.”

“How—?”

“The way he promised all along—soldiers quartered in the bomb shelters will do the deed.”

“There aren’t any soldiers in Furnestine’s bomb shelter.”

“There will be—just as soon as they finish up wherever they are at present. Each squad has a certain list of shelters for which it is responsible. Sarno doesn’t have enough men to blanket three planets.” His smile was devoid of humor. “It takes an awful lot of logistics to murder three billion people, even at the rate of six million a throw.”

“Nobody’s going to be murdered,” Rierson said flatly. “We’ll stop that before it starts.”

“How?”

“All I’ve got to do is give the word and the entire working force of Atlanta rises up in arms.”

“Excellent. Wonderful.” Donovan’s tone was biting. “So you slaughter the two thousand some-odd troopers in and around Atlanta—and then what happens? Sarno is no fool; if robots start killing his men, he’s going to start smashing robots. Before your robots could get started good, bombs would be falling on every robot communications center on three planets.”

“But we *can’t* just sit by and let them—”

“On the contrary, that is just what we must do.” He shook his head. “I’m surprised at you, Rierson—I would have thought a man like you could see the folly of what

you’re suggesting. One provable case of armed robotic resistance and Sarno lowers the boom good and plenty, leaving isolated master-brains to try to cope with the Larrys—and leaving us high and dry. But you know all this as well as I do; you told me yourself about your efforts with the solido-images at the Pen—and it was you who suggested that ‘ghosts’ strike in Sydney and Portland and Canali and Nairobi and all the other places to take some of the pressure off Atlanta.”

“Yes, but—”

“As I said, Sarno is no fool. Perhaps he already suspects what’s going on—*maybe the broadcast itself is a trap*. It wouldn’t be the first time the good ol’ *Sulis* had spoken with tongue in cheek—knowing unfriendly ears were listening in. Maybe he’s trying to force us into showing our hand.”

“And maybe, just maybe, they’re sincere. What then?”

“Then it is out of our hands. It is up to the Delegation the *Sulis* spoke of—and the twenty battle-squadrons. Meanwhile, we ought to be making tracks—or, rather, *not* making them—right out of here. Sarno has had enough of Atlanta by now. Time we moved on to greener pastures.”

“What about them?” Rierson indicated the ranked sleepers.

“Any reason they should get preferential treatment over anybody else in this burg? They’ll have to share Atlanta’s fate.”

“I don’t like it.”

“Neither do I—that’s just the way of it. We jump our gun, we’ll be killing any chance we might have been able to give three billion people.”

“The robots won’t like it, either. They aren’t capable enough of taking the long view to stand idly by while six million people are murdered in hopes that such inaction will save a greater number of lives later.”

“I know that, too,” the truck driver said. “For the sake of their sanity, you’ll have to order every robot in the CD network to forget Atlanta exists. Charlie and the other master-brains here will have to deactivate themselves.”

“How do you know they won’t rebel against such preposterous instructions?”

“They don’t have any choice, do they? We’re the best they’ve got—so they’ll have to obey us until somebody better comes along. If it becomes necessary, we can undergo lie-detector tests to prove the validity of our claims—or rather, I can. I can see you’re still not quite convinced.”

“You do that,” said Rierson. “You go take a test and convince the robots not to act, and deliberately leave Atlanta helpless under the ax—and you’ll be held responsible by law for every man, woman and child here.”

“I know. And”—his face was tight-drawn as he said it—“I’ll accept full responsibility for anything that happens . . . if it happens.” He stood up, tucked the cube in his

pocket. "But the execution is five days away—and an awful lot can happen in five days. Meanwhile we might as well put the time remaining to good use."

"Meaning what?"

"Come on over here and I'll show you."

He followed the squat man to a number of longish cylinders stacked cordwood-fashion near the door. When Donovan lifted the top one off the pile and stood it on end, he remembered where he'd seen it before: being unloaded from a jet-flivver and carried into one of the prefab huts at the Pen.

"What d'you think these are—bottled gas?"

"I remember thinking they looked like that when I saw them the first time," Rierson admitted.

"And when was that?"

"When I was getting ready to turn the robots loose on the Pen. They were being taken into one of the prefabs."

"Yeah . . . that's where the robot said he'd picked 'em up."

"You asked about them? Why?"

"Because Larrys—at least Larrys bivouacking on an enemy world—don't use bottled gas. Because my curiosity was aroused." He fiddled with the nozzle atop the cylinder. "What d'you think would happen if I opened this?"

Rierson eyed the nozzle distrustfully. "We might all expire in our tracks. I don't trust alien gadgets."

"Don't be provincial," chided the truck driver. "It might also be some kind of joy-juice with which we could go on a jag to end all jags."

"I'd settle for dragon seed," Rierson countered, a trifle bitterly, "since robots don't seem to be worth much."

"And that," said Donovan, ignoring the comment, "might be just what we have here: press the nozzle and *poof!* Minute missiles, instant infantry, sudden space-ships. We'll see shortly."

"We will?" Rierson's interest picked up. "I seem to be missing a lot of obvious points. See what?"

"Patience, my long-faced friend, patience . . . ah!" A salesman came through the door, swept the room with impassive gaze and came toward them.

"Mr. Donovan?"

"Here."

"Sir, Mr. Harris gave me a message to relay to you."

"Relay it, then."

"Yes, sir. The answer is affirmative."

"That's all?"

"Yes, sir."

Donovan looked at Rierson. "Have one of the warehousemen bring a sleepyhead upstairs—the one in the orange jacket, see him?"

"I see him, but—"

"Don't argue. Just do as you're told. And act like you know exactly what you're doing." He hefted the cylinder, started for the door.

"But—"

"Don't argue, I said," he growled, without looking back. "Don't open your mouth. Not once. I've just found

out that, among all his other gifts, Sjilla can read lips. In English, yet. Now, *move.*" He went out of sight and up the stairs.

Rierson was inclined to stop him but refrained, instead speaking sharply to a massive Physak painstakingly dividing a heap of captured Lralan weapons into neat little stacks. The robot rose from its crouch with tigerish grace, glided across the room and lifted the man in the orange tunic into its arms like a sleeping child. Then it, too, disappeared through the door.

James Rierson followed, wondering if Donovan had gone slap-happy from his untender treatment at the hands of the Lralans.

"Yessirree!" exulted Michael Harris, "you sure hit the jackpot on that guess, Bradford."

He was sitting where Rierson had left him, in the chair before Charlie's control board, watching one of Charlie's viewscreens. Visible on the screen was the group of Lralans bunched in the corner of the subbasement far below. The camera looked out from the wall, giving a good view of the whole premises.

"You see, my young and baffled friend," Donovan said to James Rierson, "Mike and I laid a simple trap for Sjilla and the boys down there. Charlie was in on it, too—he provided the bugs. Didn't you, Charlie?"

"I did indeed, sir," responded the master-brain.

"You mean you bugged that corner? Why?"

Harris cast an imploring glance ceilingward. "The innocence of youth! Are you sure, Bradford, that this is the storied Spook of Baxter?"

"Sjilla was," grinned Donovan. "And I trust his judgment. But as to why we bugged that corner . . . It's the next best thing to mind-reading, old son, if you can get your enemy in a pocket where he thinks he can talk freely—a pocket you have previously prepared."

"Which is why you insisted on putting them in that particular corner to start with," Rierson said. "I should have known there was some kind of devious reason."

"Such language!" Harris reproved severely. "Respect your elders, son. Didn't your uncle teach you any manners?"

"He's in on this, too, I suppose." Rierson studied his uncle's untroubled countenance on the screen. "You'd never know it from looking at him, would you?"

"Lad, lad!" Harris patted his large stomach with much satisfaction. "We were at this before you got out of training pants. We used to give Sarno fits, the three of us, in the good old days, so we decided a logical step at this point was to spy on Sarno's favorite spy in order to best determine how to take up where we left off twenty years ago."

"And?"

Donovan thumped the metal cylinder he was still holding. "Remember that remark you made about dragon seed?"

"I remember it."

"Well, this is it." He sat it down carefully. "This, my young friend, is the Antidote to Sarno's Dust. I knew it had to be somewhere in that camp—else how did they intend reawakening those fifty people your robots pulled out of there? But I didn't know what it would look like. Sooo . . ."

"So we arranged box seats for Sjilla and Company down below," Harris took up the tale. "And we put on a little act—seemed fitting, somehow, seeing as how Sjilla intended corraling you via the same method. Donovan was to go through all the likely-looking piles of junk while I sat here with my ear glued to the mike and recorder running. The first time out was a winner; when he started messing with those cylinders, Quiror very nearly had a stroke. Sjilla told him to shut up, even if Donovan accidentally awoke somebody it would only be added grief for us, the shock of awakening to such an environment being too great for the average individual. In other words, we'd be saddled with a loony."

"And he's right, too, I imagine," Donovan continued. "But we decided to play the thing out, so we had you cart out that fellow in the orange jacket after I left with the cylinder. That put Quiror into a panic, and even bothered Sjilla."

"Give a listen," invited Harris. He pressed a stud.

"They're up to something, all right," said a voice. Quiror's voice. It sounded worried. "Look . . . they're carrying a man out. You don't suppose—?"

"That they've found out? How could they?"

"But they're thinking too close to home!" insisted Quiror. "One whiff of that Antidote, and—"

Harris switched the tape off. "I quote: 'One whiff of that Antidote, and—'" He smiled benignly, reminding Rierson of an overweight cherub.

"You're going to give the man in the orange jacket such a whiff?" he asked.

"Certainly not!" Harris looked horrified. "We've got enough to worry about without holding somebody's hand while he adjusts to the fact that Old Mother Earth just ain't what she used to be. All we wanted was to ascertain our findings—not start trying to wake everybody and his brother up. Leave that to the proper authorities."

"You seem to forget," pointed out Rierson, "that the proper authorities, also, are sound asleep. You've got to start somewhere."

"Precisely. We've got to start somewhere." He beamed fondly at the big man. "You're learning, son, you're learning. Given time and patient tutoring, you might get by. Very incisive thinking there—you've put the problem in a nutshell."

"Can't we dispense with the sarcasm?" He was a little rankled by the other's treating him like a promising but inept youth.

"By all means." Harris was suddenly solemn as an owl. "Shall we tell him, Bradford?"

"I guess so," Donovan said. "He looks trust-worthy to me. Tell me," he went on, before Rierson could re-

tort to that, "do you know what a Planetary Defense Center is?"

"Haven't the faintest idea," Rierson gave back. "Whatever you're driving at, you'd better hurry—it's almost time for my diaper change."

"All right, you know," conceded the truck driver. "And do you remember your high-school geography well enough to know where the nearest one to Atlanta is?"

"*El Scorpio*," Rierson replied promptly. "The Texas panhandle."

"Bravo!" applauded Harris. "You learned your lessons well."

"No, I didn't," he contradicted. "I always read Erle Stanley Gardner classics in geography. I remember simply because I toured the place last year at the invitation of the War Department. Good publicity, you know—*Civic Leaders Visit Military Installation*."

"Ouch!" Harris grinned ruefully. "That's handing it back with a vengeance! The closest I ever came to being a civic leader was when I ran for dogcatcher on Sirius III. I lost by a landslide."

"Then you know how to get there? To the Scorpion, I mean?" Donovan persisted.

"I know."

"Good."

"Why is that so good?"

"Because, as you said"—he tapped the cylinder significantly—"we've got to start somewhere. And a PDC strikes me as being as good a place as any, better than most. Military men these days have to be supermen. Sound of body"—some unfathomable emotion showed itself briefly on his face, and then was gone—"and stable of mind. If anyone could recover from the shock of Reawakening quickly enough to do us or themselves any good, it would be the men chosen to man the PDCs."

"Granted. But just how do you propose to go about it? No doubt every PDC in this system has a Llralan command post on it by now, with technicians to dig out defensive secrets and plenty of guards to insure that something like you're contemplating doesn't happen."

"No doubt at all," agreed Donovan.

"Well?"

"There are ways and means, boy—ways and means." He hefted the cylinder again. "Meanwhile, there's the minor problem of getting out of Georgia and into Texas without getting shot. That calls for a council of war. When do your supernatural visitations upon the Llrals begin?"

Rierson checked his watch. "Two hours."

"Good. That gives us time to thrash things out." He looked at Harris. "Where'd Nogales get off to?"

The fat man shrugged. "Staring out some window toward the north is my guess. He is suffering from a very recently revived conscience."

"Meaning?"

"Meaning he is now engaging in the pastime of review-



ing his misspent youth and feeling sorry for himself.”

“Well I’ll be damned.”

“Very likely. You want me to get him?”

“Yes. Bring him down to the subbasement. He can engage in self-pity some other time; we’re going to need his gun.” He turned to Rierson. “Let’s go down.”

And down they went.

## XXV

The men of battle-fleet Z-501-V, Code Name *Sleeper* were, for the most part, fighting men in their prime—men taken platoon by platoon from the battlefronts and moved back to a holding area far behind the lines months in advance of the actual assault upon Terra. Moved back, sequestered in isolated garrison-posts strung through a bleak mountain range upon a world that just barely qualified as habitable, kept completely in the dark as to their proposed mission for fear of security leaks and denied all liberty and correspondence privileges for the same reason. They were men in which the sap of life flowed richly, but they were also obedient soldiers and so with the fatalistic acceptance of their breed they caught up on lost sleep, sharpened their marksmanship, participated in the innumerable games of chance that are an inherent part of any garrison duty, speculated upon their chances of surviving whatever the High Command was cooking up *this* time, or just sat and grew weary of staring at one another.

The orders to ship out brought no relief—not even the relief of a sudden and violent return to combat. Instead there had been more waiting, this time in the cramped confines of the troopships as the fleet lay dormant well within enemy lines awaiting the signal to strike. Boredom was supplanted by gut-wringing tension as the danger of being sighted grew more likely with each tick of the clock. And then at last the briefing and into the dropships and out high above the nearly unresisting planets, and—after the initial stir of activity surrounding landing—the settling down to man their bomb-shelter posts. Which, after all, was just another form of waiting.

The sap, long contained, began to bubble dangerously near the surface. The men of Z-501-V were tired of waiting. They had been obedient soldiers, they had followed orders, they had waited interminably and jumped unquestioningly into the stronghold of the Federation with only their superiors’ preposterous-sounding reassurances to bolster their courage. It was time, figured the men of Z-501-V, for some of the sap to spill over, for accumulated steam to be blown off, for a little manly diversion.

By the second day after landing they had submitted their traditional soldiers’ petitions.

By the sixth day the arrangements were in the works, given only slightly less priority than the developing problem of the Unaffecteds.

By the tenth day, the first units to be allowed liberty had received their customary doles of *walsos* from Stores,

the requested Antidote from the flagship, certain cities had been designated for their use and transportation was being arranged.

By the fourteenth day, despite abrupt and unexplained cancellations of petition by several units that had pressed the hardest for them to start with, festivities were getting under way.

By the fifteenth they were going full-blast.

And by the sixteenth . . .

Night under a summer sky and a silent, darkened city lay sleeping beneath the myriad stars. Two shadow-shapes sat within a shadow-truck beside a shadow-curb and watched with shadowed gaze the only oasis of light and sound in all that concrete stillness. Across the street a long, low building that ran long on glass and short on masonry was ablaze with light and abuzz with muted sounds of merriment. Behind those gigantic, opaqued windows through which a diffused yellow glow fell softly on a row of troop trucks below, supremely indifferent to the brooding slumber of the city or the officious presence of the pair of Military Policemen, the proud Third Battalion of the 6077th Infantry was in its cups.

Abruptly a door banged open and laughter, loud shouting and louder music spilled uproariously into the night. A figure was silhouetted momentarily against the light. It weaved uncertainly. Voices called after the early leavetaker, bawdy jokes about his inability to hold his liquor or last the full liberty were cut from earshot when the door slammed shut as violently as it had opened.

The MP in the driver’s seat, having started when the door opened, now settled down again. “Really having themselves a ball, aren’t they?”

The second man shifted his wad of *falzwok*-weed from one cheek to the other, spat carefully into the street. “Any reason they shouldn’t?”

“Yio,” agreed the driver vehemently. “I could be aboard ship pounding my ear if they were where they’re supposed to be doing the same.”

The *falzwok*-chewer grinned in the dark. “Do I detect a note of envy, Vasq? Envy for the lowly foot-sloggers?”

“Lowly! The Infantry always gets the most of everything—and always first! I can’t see it.”

“You obviously couldn’t see going out the hatch four or five *siveb* above an enemy planet with nothing but rifle and grav-chute to insure the safety of your precious skin, either,” observed the *falzwok*-chewer. “Else I would be deprived the boon of your companionship this fine summer evening.”

“The Military Police is as honorable a service as any!”

“I agree. But it is also somewhat less hazardous than the Infantry. The brass realizes that—and compensates to a degree by awarding certain hazard-privileges.”

“You’ve got it all figured out, haven’t you?” Vasq inquired sarcastically.

“I have,” responded the other. “So why not settle back

and enjoy the cool of the evening after the heat of the day? Consider the stars—how differently they appear from the southeastern quarter-sphere of this world than they do from Villair.”

“I’m from Zaxen—not Villair,” snapped Vasq. “And I’m not a stargazer.”

“You should try it, stargazing. Brings tranquility of the spirit, a cooling of the temper—”

“But no women!”

“You,” said the *falzwok*-chewer, laughing, “are hopeless.”

“Me? You’re hopeless. Women around—even subsonically controlled zombies—and you count stars!”

“I count stars,” agreed the *falzwok*-chewer. “We meet a battalion at the landing strip, load ’em into the trucks and escort ’em here for a night’s liberty and then send ’em back thoroughly soused to their bomb shelters and their duty of sitting up with living corpses. What we’ve got here is no more than an automated brothel; blank-eyed, shambling creatures with their brains in space-freeze dancing to the tunes played through those little boxes on their skulls. We sleep by day and manhandle recalcitrant drunks by night—a ghoulish business, this—and yet you can’t wait to jump in and join them.” He slid down until his neck rested on the back of the seat. “I count stars,” he repeated. “And it’s thankful I am for their company.”

Vasq had no ready comeback for that; he had been taken aback by the other’s tirade. The silence between them stretched. Finally he got out of the truck and walked over to the small fire built by the troop-truck drivers in search of more sympathetic companionship. The *falzwok*-chewer shifted into a more comfortable position and wrapped himself in a mantle of private thoughts to ward off the creeping chill of the African night. His wad of *falzwok*-weed became tasteless and he spat it out. Time dripped away and his thoughts matched pace, dripping slowly one upon the other and building fanciful stalagmites in a cave of half-forgotten memories. A shooting star flamed briefly beyond the tallest buildings of the city, and the shouting across the way died down. He found himself drowsing. . . .

It seemed he had hardly closed his eyes when Vasq was shaking him urgently “. . . Up, Sergeant. Sergeant, wake up! Sergeant—” Vasq’s voice held a peculiar note; the sergeant realized it was fear.

He stirred. “Hm-m-m?”

“Look!” Vasq was pointing across the street.

He looked—and shot upright, the sleep burned out of his head as by atomic flame.

Across the street, the building was as dark as the rest of the city. Not a single light burned.

“Must be later than I thought,” he said. “The battalion gone?”

“No.”

The sergeant twisted around to give the driver an

uncomprehending stare. “What do you mean, no?”

“I mean *no*.” Vasq waved at the building. “They’re still in there.”

The sergeant looked back at the building. “How long have the lights been out?”

“They just went out.”

“All at once?”

“All at once”

“Was there anything before that?”

“No . . . Yes . . . I mean I *think* there was. All the shouting and laughing stopped—suddenly. The record players kept playing—they’re playing now—but that was all. No more voices. I was coming to get you when the lights went out. I—” His fingers dug convulsively into the sergeant’s shoulder. “*Sarge!*”

“I see it,” growled the sergeant. “I see it.”

Across the way, atop the three-story building which had so recently rung to the sounds of the Third Battalion’s mirth but now was still, a pale radiance shimmered. As they watched, a tiny, globular thing rose slowly above the parapet like a pocket moon, casting a weird orange light over the darkened building. For a long heartbeat it hung suspended, pulsing softly, then began an erratic journey along the lip of the roof. It bobbed, it dipped—long, tenuous streamers trailed away behind, fading slowly into nothingness. It made a complete circuit of the roof, arrived at its original position—and hung there.

“Great Sirri protect us,” breathed Vasq. “*What is it?*”

“I don’t know,” said the sergeant. “*I don’t know.*” His gun was in his hand. When something moved in the nearby shadows it was only by the strongest exercise of will that he did not fire. It was one of the truck drivers, his face a pale, frightened blur in the dark.

“You see that thing?”

The sergeant lowered his gun. “How could we help but see it?”

The truck driver shook his head. “I don’t know. I . . . *By the Black Winds of Tervillon, there’s another one!*”

The sergeant and Vasq turned as one. A block away, a second ghostly moon shimmered and bobbed as it duplicated the first’s roof-girdling maneuver above the building over which it hovered, and then went quiescent.

“And another!” Vasq’s voice throbbed with ill-concealed panic. “*Sarge—!*”

A fourth, a fifth, a sixth of the little spheres appeared, dipping and weaving in their enigmatic little promenades around the roofs above which they materialized. A seventh, an eighth . . . the utter blackness of the canyon-streets between the building-craggs began to be suffused with subtle luminescence.

At length, twenty of the things hung silently above the rooftops.

And the immediate shadows surrounding the truck began to fade before a cold brilliance that flooded down from directly above, from six floors above, and strengthened visibly.

They looked upward, and Vasq uttered a curse that was half-prayer.

One of the spheres peeped over the building at them, a gaseous, palpitating seeming-entity that began its supernal waltz immediately they decried its presence.

Vasq threw his arm up wildly, and a beam of blue fire stabbed at the thing. His aim was true; the beam cleaved it cleanly.

His aim was true, but it had absolutely no effect upon the pulsing thing. None. For a moment he was unnerved completely, then, mouthing a string of horrible oaths that did credit to his years as an MP, he held down the firing stud and hosed flame at the thing, his eyes wide-staring, maddened.

The sergeant and the truck driver moved with snaking speed—the one to protect his partner, the other to save his own skin. The sergeant reached out and yanked Vasq bodily into the cab; the truck driver went head-first beneath the vehicle. Masonry torn loose by the beam of Vasq's weapon avalanched down, exploding on the pavement like ancient artillery, pelting the steel body of the truck, smashing but not shattering one side of the tough windshield.

When it seemed safe to come out the truck driver did so, dusting himself off absently and gaping at the roofs.

"You all right in there?" he questioned.

"All right. You?"

"Fine," he said, and then again, "*Fine*, sergeant. I don't know what he did, but whatever it was, it was right." His voice held happy incredulity. "They're gone, seregant—all of them!"

And it was true. The rooftops were empty and as dark as they had ever been, and the phantom moons were gone as if they had never existed. The sergeant climbed slowly out of the truck, half-expecting to see the lights come back on in the building across the street. Whatever alien magic had caused that weird display, searfire had erased it—and it seemed only proper that the lights should spring back to life, the shouting and laughter resume.

But the windows remained dark, and the only sound was that of the still-operating record players.

The truck driver followed his gaze. "You going to take a look?"

"We are," the sergeant affirmed. "Want to come."

"Not particularly—but I will, anyway." He drew his sidearm. "Hot flame seems to be prime medicine for the ghosts of at least this planet." He laughed hollowly.

"Let's go then," said the sergeant.

They crossed the street, pushed open a door, found themselves in a long corridor. Vasq unlimbered his torch, sent its green beam stabbing ahead. Three doors down, an arm protruded into the hallway. They went toward it. It belonged to a man with corporal's chevrons, sprawled on his face as if struck down while making a desperate dive for the door. Vasq knelt, rolled him over.

"Sirri!" He went pale.

The corporal's eyes were open, but he wasn't seeing anything. His throat had been neatly and expertly cut, from ear to ear. A thick pool of blood was puddled where he had lain; his tunic-front was a sodden mess.

The sergeant stepped over the body, flashed his own torch around the room beyond. One look told him all he needed to know. When the truck driver started forward, he held out a restraining arm.

"There's nothing you can do for them now."

The truck driver looked as if he were going to be sick. "All . . . dead?"

"About ten of them—all with their throats cut. There's a subsonics specialist, too, and evidences that they had some of the Rekk females in there. But they aren't there now." He faced resolutely down the hall. "We'll check the rest of the building. They can't *all* be dead. Not like this."

But they could. Each room, each bend in the corridor, disclosed new butchery. On the second floor the truck driver stumbled over something that went rolling in the dark. When Vasq put his light on it, what was left of his nerve evaporated completely. He backed away, wiping his hands hysterically on his tunic and muttering a weird litany, his eyes bugging.

It was a head, completely severed from its body. Since there were several headless bodies and a number of loose heads, it was not immediately apparent just whose he had booted. Not that it mattered much.

Vasq watched his antics curiously. "What's he saying?"

The sergeant listened. "It's an old, old dialect—I can only catch a few words. It appears our friend here is an ancestor-worshiper—he is calling upon the spirit of his mother's mother to protect him in this house of death."

"Ghosts," snorted the MP disdainfully—and then shut up and looked around him at the carnage. The sergeant could almost see the wheels go round as he connected the orange moons outside to the death all around him. "Ghosts," he whispered, as if some great truth had been revealed to him. "Ghosts . . . *Gremper!*"

The sergeant sent Vasq outside with the ancestor-worshiper in tow and went on to the third floor alone, sternly beating down the cold waves of fear threatening to wash over him. When he had finished his grisly survey and satisfied himself that nothing lived within the building he retraced his footsteps, shut off the still-running record players and went out of the building into the brooding night and away from the thick, fresh stench of death that hung over all that remained of the once-proud Third Battalion of the 6077th Infantry.

Overhead, the suddenly-remote stars seemed to burn down more coldly.

## XXVI

The intra-ship car whirred to a halt, the doors slid back and Martak Sarno dismounted wearily. The days

of worry had gone for naught; his ultimatum had been heeded. Atlanta was spared. He had just come from the *Risstaixil's* radio shack. Beam-radio messages were steaming in from lonely relay points out along the line—messages heralding the surrender of the specified number of Terran warships.

He sighed heavily, tugged his wrinkled tunic straight and settled his pistol belt more comfortably. He had taken to wearing the pistol everywhere since Donovan and Sjilla had been listed among the missing—and since four battalions of his paratroops had died bloodily in widely-separated cities under circumstances that had witnesses babbling of angry ghosts. The battalions had died, and in other cities frightening phenomena had been reported—reported by responsible officers, and observed by dozens of men simultaneously. And now the pistol was his ever-present companion. He dared not examine his motives for wearing it too closely; it sufficed that its familiar weight made him feel more at ease. And anything that could offer a modicum of comfort was welcome in these trying times.

Turning, he faced a door across the corridor. The door to the conference room. Behind that blank portal guarded by a pair of equally blank-faced troopers awaited the Terran Delegation. He felt a small twinge of uneasiness, shook it off impatiently. At least here he was master; he had them over a grist-rock and they knew it well. At least four of them did. That admiral, though—he had been guessing at things he couldn't possibly know, guessing shrewdly. And he had been noting the effect of his guesses on Sarno. Now he had to be faced again, along with the others, and informed of the new demands the Federation must meet in order to buy continued life for its three billion sleeping citizens.

He would have preferred facing Donovan gun to gun, or those ghostly orange moons—or even, most horrible of all, a week's worth of paperwork—than to walk into that room and face those five sets of eyes, those five angry faces.

But that was ridiculous! *He* was the conqueror—not those five in there. They were here on *his* terms—not he on theirs! And the conqueror was going to present his demands, and they were going to listen, quietly and respectfully, and then they were going to fulfill those demands promptly and with dispatch. His was the hand that held the whip—and it was best not to let them forget it, lest they grow rash.

He squared his shoulders, nodded to the right-hand trooper, and passed resolutely through the door as the trooper opened it. He went around the table, took his seat and positioned his list of terms exactly in front of him. Only then did he deign to notice the five across the table from him.

"Gentlemen, you may be seated."

They sat, obviously fuming over having been made to stand like junior Llralan officers until he assumed his seat. The pair of troopers that had prompted them to

their feet returned to their posts on either side of the door as the outside trooper closed it.

"Let me begin by saying, gentlemen, that your alacrity in seeing that my demands concerning the battle-squadrons were met is very gratifying."

"I'll just bet it is," Carstairs said in a mimicking tone.

Sarno frowned at him. "Do all Federation generals behave like unruly school children in the face of adverse circumstances?"

Carstairs glowered back at him. "Tell those two bully boys to go chase themselves and I'll show you how a Federation general acts!"

"Indeed? Please, gentlemen—let me make one thing perfectly clear. I grow exceedingly weary of your empty threats, and have decided to tolerate them no more." He drew his pistol, placed it beside the list of terms. "Neither do I find your constant outbreaks during the course of negotiations pleasant. They shall terminate forthwith. You will conduct yourselves as men and ranking officers, or I shall suspend negotiations until the Federation can send me someone who will."

"Uh-uh, Buster." The admiral shook his head. "We're it. You deal with us or you don't deal."

"I find," Sarno said, "that I am not making myself clear. If I grow dissatisfied with your actions—you will not be able to deal with anyone. You will be dead."

"You wouldn't dare!" That was Carstairs.

"Wouldn't I?" Sarno laughed, and the sound of it was tinged with something akin to madness. "Wouldn't I just?" He sobered abruptly, skewered the general with a glance. "There is nothing, absolutely *nothing*, I would not dare. You—these planets—the *Federation*—all are in my power. I am humored; I am not told what I would and wouldn't dare."

"Like a child with a flamer," observed the admiral.

"*Exactly* like a child with a flamer," Sarno agreed, not at all miffed by the comparison. "Like that, exactly." He grinned toothily. "Now do I make myself clear?"

"Disgustingly," replied the admiral.

"You," said Sarno thoughtfully. "You, I don't need. I think I'll rid myself of you." He picked up the gun, aimed it at the admiral's white, beribboned tunic.

Garcia looked horrified. "You're not serious?"

"I'm not?" chuckled Sarno—and fired. The weapon's beam caught the admiral just below the throat, sent him over backward, chair and all. The two Congressmen sat rooted; Carstairs and Raymond were on their feet. Carstairs had a feral snarl on his sharp face.

"And then," said Sarno lazily, swinging his gun to cover Carstairs, "there were four. Or is it to be three?" He waited. The troopers at the doorway had been taken by surprise, but now their guns were leveled. A faint tracery of steam rose from Sarno's gun barrel. The tension stretched.

And then Garcia—his face pale as bed linen—spoke. "Sit down, Carstairs, for God's sake. We're dealing with a madman here—no telling what might set him off."

Carstairs emitted something like a groan, sank back into his chair. Raymond followed suit. The tension leaked away. Sarno gestured to one of the troopers, indicated the dead admiral.

"Get that out of here, trooper—dump it in the garbage incinerator. And send a crew to clean the carpet as soon as we're through here."

"Yes, my general." The soldier slung his rifle, grabbed a shiny space-boot in either hand and dragged the corpse across the carpet, leaving a trail of thick, dark blood and charred bits of flesh. His partner opened the door and he dragged it through, silencing the startled inquiries of the troopers outside with a word. The door cut him from view, and Sarno looked back to the four remaining Terrans.

"I can tell you what *might* set me off, Senator Garcia—and that is any other deprecating reference to myself. Understood?"

Garcia's eyes burned like hot coals. "Understood."

"Excellent. Then we can get on to the order of the day. That being the list of conditions that must be met before Terra and her sister planets are returned to you."

"Those being?"

"The list is quite impressive. I doubt you could remember them all to relay to the High Command if I simply repeated them to you, so I have had five lists drawn up. However"—he laid down the gun, picked up the top sheet—"you won't need one of these now, it seems." He tore it precisely into quarters, then into smaller bits, and piled the pieces neatly to one side.

"Why, you . . ." began Carstairs.

"Now, now!" Sarno raised a warning finger. "*Shh-h-h!* Can't tell what might set me off." He pushed the remaining four sheets across the table, waited until Garcia had handed one to each man, keeping one for himself.

"As you can see," he said, "the demands are not at all unreasonable. The Empire demands none of *your* worlds; it wishes only the restoration of all those taken by the Federation in the course of the war. It asks that all prisoners be surrendered up, and that all behind-the-lines fortresses, listening posts and shipping lane raiders capitulate within a specified amount of time. Further, it requires the names and locations of all spies, operatives, agents and collaborators within the borders of Empire. As insurance against new incursions by spies and saboteurs, certain high-ranking military and civilian personnel shall be turned over to the Supreme Council as hostages. All 'Freedom Radio' broadcasts to subject races of the Lralan people will cease forthwith, and the continued well-being of the Council's hostages will depend upon whether or not the broadcasts resume once Terra is freed, as well as upon the curtailment of all clandestine intelligence activities.

"And, last but by no means least—all Federated armed forces must disengage from the battlefield known as the Line and withdraw within the Federation's borders

until such time as the cease-fire is terminated and conflict resumes."

"But those conditions will put us right back where we were at the beginning of the war!" exploded Raymond. "They refute every gain we've made—and leave you exactly as you are. And those additional handicaps! Why . . . why, it's like handing you a club to beat our brains out with!"

"That," said Sarno smugly, "is your problem, not mine. At least I have not demanded anything like total surrender of all Federated armed forces."

"The only reason you haven't is because you know you'll never get it," opined Carstairs. "You may not even get all this."

"No? That *will* be too bad won't it—for the people of these three planets, I mean? Because, gentlemen—and here's an important consideration—*one city a day will lose its population until those demands are met.*" He leaned back in his seat, smiled at the ceiling. "That should give you plenty of time, shouldn't it? We'll start with the small townships, of course, and work up. By the time we get to New York, say—or Hong Kong—you should have been able to resign yourselves to your fate and begun to make arrangements."

Not even Carstairs felt moved to verbal protest; they simply sat and stared at him as if hard put to accept the reality and enormity of what was happening to them, and to the Federation. Sarno placed his hands on the table, stood up.

"And now, gentlemen, all the cards are on the table, in Terran parlance. I have shown my hand, and it is a good one. There no longer exists the slightest suspicion in your minds that I am bluffing. I can see that. Very well: this meeting is adjourned. It only remains for you to convince the High Command to accede to my demands, basing upon what you have seen here your methods of convincing.

"You may leave."

They left, and he sank wearily back into his chair. He felt curiously lightheaded. It was all up to the Terran High Command, now—he had voiced the Empire's demands, and not one single concession less than had been specified would buy life for the three planets involved. He had rested his case, and in a very short time the jury would go out. All that remained for him now was to hang on long enough to act as executioner if that jury's verdict should be unfavorable.

The decision was simple: three billion lives against voluntarily crippling themselves so badly that total defeat was a virtual certainty. The basic decision was simple, all right, but the ramifications of either course of action would extend to the ends of recordable history. They had come to a parting of the ways. Would they hold victory so dear as to squander three billion lives in pursuit of it, or would they ransom the worlds and then fight on, pitifully restricted?

Only time would tell. Meanwhile, there was this new and utterly baffling turn of events: the appearance of actual *things* in the night; the swift slaughter of four full battalions, each in one of the cities designated for the soldiers' use during liberty, each within the actual building set up for that liberty—and each accompanied by weird manifestations above the rooftops and the disappearance of the Terran women interned there for the troopers' pleasure.

He groaned softly. *Four battalions!* By comparison, the fate of Lieutenant-general Quiror and his command in Atlanta faded into insignificance, though it had been a symptom of the disease now running rampant. For with only three million soldiers to do the job on three *billion* sleepers, the loss of even a single man was painful . . . but the loss of four battalions is excruciating. Four battalions and not a single clue as to the identity of their slayers, much less anything concrete to strike back at, to wreak revenge upon.

He climbed to his feet, moved to one of the thick portholes lining the conference room. A weak, heatless sun was shining on the drifted snow far below. The porthole disk itself was rimmed with ice.

*I do not, he told himself, believe in ghosts—not in bog-spirits, not naparra, not the ancestral spirits of Llralla nor the native ghosts of Risstair. And certainly not in Donovan's grandfather's ghost, or angry Terran ghouls that slit the throats of the defilers of their female descendants and then dance a jack-o'-lantern polka above surrounding buildings.*

Nevertheless, he had canceled all liberty-passes—and for virtually the first time in the annals of the Llralan military, such action had met with no griping in the ranks. That worried him; when the enlisted men started agreeing with restricting command decisions, trouble was brewing. Bad trouble.

He squinted out the porthole at the winter-wrapped slice of this savage planet to which he had come with his Dust and his fleet and his high hopes, and felt an ugly foreboding deep in his soul.

*On the other side of this world, he thought, it is night. And Venus and Mars—they have their night sides, too. I wonder what walks there now?*

The frosty glass gave back no answer and he turned and retrieved his pistol from the conference table and left the room, stepping carefully to avoid the mess the Terran admiral had made on the carpet.

## XXVII

The three sleeping planets pursued their individual orbits around their yellow sun, and each turned independently upon its axis, and that fact made very little difference to their populations. Night or day, high summer or hard winter, they slept peacefully on.

But the invaders were *not* sleeping, and therefore, if they found themselves confronted by things normally

confined to bad dreams, they could not resort to waking up to escape.

And they *were* confronted . . .

"Six!" said the corporal.

"And seven!" responded the lanky private jubilantly. He began to gather in the playing markers as the on-lookers swore. "Another game, anybody?" He grinned, waved at the lax shapes sprawled beyond the glow of their battle lantern in the cavernous bomb shelter. "My luck's running hot—how many did you get that time, corporal?"

"Ten," grunted the corporal disgustedly.

"And ten makes seventy-five," he said. "Seventy-five Rekks for the six of you to divide up according to your winnings. Me, when if The Order comes, I go kiting along to the next shelter on our list, do in my share there and then so on back to the ship." He clattered the markers together. "Shall we move on to the next shelter, gentlemen?"

"And just how," inquired a burly trooper, "do you know how many you'll be responsible for in the next shelter?"

The lanky private gestured airily. "Me, when I get a chance to go topside and breathe, there's a method to my wandering: I looked up our next stop. Being good at simple arithmetic, I figured out that exactly one hundred one and one-half Terrans are my quota there. Sooo—" He clinked the markers suggestively. "Any takers?"

"Not on your life," said the burly one. "Fifteen extra here is enough for me."

"No sporting blood," he looked around. "Anybody? Corporal?"

"I agree with Vorgen," the corporal said. "Twenty-seven will do me nicely."

The others were of a like mind and the game broke up as they moved away from the table to stretch their legs and curse their luck. Conversation lulled and the low, ever-present drone of the sleepers' breathing seemed to grow louder. Up at ground level, according to a patrolling guntruck they had made contact with a while back, a tropical storm was raging, but here in the shelter there was no evidence of it. There was only the hypnotic breathing of the sleeping Terrans and the nearly inaudible hum of the unseen machines that kept the air pure, the temperature stable and performed the various other chores necessary to the well-being of the sleepers—and, consequently, of their guards.

"Trapped with a bunch of nongamblers," complained the lanky private, "and no liberty in sight. Life is worthless."

"You're right," agreed the corporal, thumbing through a magazine found in the shelter. "Your life *would* be worthless if you got the liberty you've been groaning about; I wouldn't give a quarter-Imperial for your chances of surviving it."

He snorted derisively. "Are you afraid of orange balloons, too?"

"When they can cut throats, yes—and when searfire only makes them go away to pop up some place else."

He shook his head in amazement. "You actually believe all that scut?"

"I believe four dead battalions," retorted the corporal, and then, changing the subject, "Say—here's a picture of Madrij, of the Supreme Council!" He pored over the writing accompanying the picture, finally shrugged. "Wish I'd learned to read Rekk; it'd be something to know what they thought about old Mad—"

The hum of hidden machinery deepened, compensating, as a sudden wave of cold air washed into the shelter from the stairs—air that smelled faintly of rain and wet things, some of the odors recognizable, others not.

"Now I wonder," said the lanky private, "what caused that? I thought these places were supposed to be airtight."

"Somebody probably opened the door," the corporal answered absently, preoccupied with his magazine.

"Yio? Who?" The private looked around. "There are seven of us here—all present and accounted for. So who opened the door?"

The machinery continued to throb at an altered pitch as the fresh air continued its invasion. The burly trooper who had won fifteen of the private's sleepers wandered over in time to catch his question.

"Maybe it was an *orange balloon*," he whispered. The private jumped in spite of himself, and the trooper brayed.

"Very funny," snarled the private. "Very funny."

"Whoever it was," inserted the corporal, "didn't close it behind him. Soxkin, why don't you go attend to that little chore—and make sure it's secure this time, huh?"

"Why me?" asked the private, showing reluctance.

"Because I chose you!" snapped the corporal. "Now, jump!"

The private gave him a dirty look, picked up his rifle and went out the door. The shuffle of his boots on the steel risers ascended beyond earshot and the corporal went back to his magazine, half-listening for the thud of the door closing.

Instead, a sudden glow lighted the stairwell followed by a hair-raising shriek of stark, unadulterated terror.

Almost before the glow faded, the corporal was leading his men in a headlong charge up the stairs. They found Soxkin on the topmost landing, huddled into a protective ball and gobbling insanely. They rushed past him to the door, guns at the ready.

Beyond the door wind-driven sheets of rain lashed through the deepening twilight, obscuring the tall spires of the city and drumming loudly on the silent cars in the street. That was all. No glowing orange spheres, no shrouded phantoms. Just the rain and the wind and the city.

"Corporal!" It was the burly trooper, Vorgen, bending over the incoherent Soxkin.

"What is it?"

"He keeps saying it was one of the cutthroat balloons," Vorgen said. He listened, went on, "He says it appeared right in his face when he went to shut the door."

The corporal hastily shoved the door closed, and they were in sudden, inky blackness. He swore. "Didn't anybody bring a torch?"

Apparently, nobody had.

He swore again and felt his way to the stairs and down. "We've got to report this," he said, and his voice was shaky—almost as shaky as his knees.

Elsewhere, a guntruck was rumbling swiftly down a rural highway bordered on either side by snowy fields and winding over undulating hills. Its headlight beams dipped and swayed and created marching shadows as it sped along.

"For Sirri's sake, be careful!" the radioman, sitting beside the driver, shouted above the noise of the engine. "You hit ice, you'll kill us all."

"Can't be careful," the driver shot back. His eyes were fastened unwaveringly on the road, his gloved hands fought the bucking wheel expertly. "The captain said hurry."

"Yio, but we won't do him any good in a roadside ditch," the radioman retorted.

The driver slowed the armored juggernaut carefully. "We should be getting there. We just passed a road sign—you catch what it said?"

"How could I?" the radioman wanted to know. "I can't read Terran. Wait a minute—" He switched on his throat-mike, spoke to somebody up ahead. Then, "If the next intersection has a marker with three vertical lines side by side, that'll be the one. Turn left."

They came at length to the proper intersection and the driver hauled the big vehicle through the turn. "Now," he said, "we go!" The engine bellowed and the truck leaped ahead.

"You'd better go slow—" the radioman worried. "If it's here at all, it should show up right along . . . *there it is!*"

The driver followed his pointing finger. "*Sirri!*"

Sweeping down across the fields on what was obviously an intercept course came a great black beast, running full-out on four slender, pistoning legs, a dark cloud of tail whipping out behind. And on the creature's back—a *man*, riding crouched, a voluminous cape billowing around him.

"Coming after us—" the radioman whispered.

"We'll see about *that*," the driver responded.

The truck surged ahead—and the beast and its rider began to close the distance, pounding closer and closer. The creature's hoofs hardly seemed to touch the ground—the radioman noticed a pale cone of light that seemed to come from *behind* the truck and follow the thing's

wild career from a fixed point, much like a spotlight on a performer, or—

Or *what?* Something he should recognize, something his training had included—he tried to think, but the thing grew larger as it drew closer, and cogent thinking was impossible with superstitious fear laying like a sheet of ice over his brain. He knew what was coming, knew from having heard of the fate of others along this road, knew all the driver's frantic maneuvering could not prevent it.

It happened. The thing loomed gigantic as it cut across the road and into the truck's headlights. And then it was rearing on its hind legs, and the rider was flinging something directly at the windshield—something that pulsed and glowed bright orange and swelled enormously.

The truck spun out of control, left the road as startled cries sounded from the gun turret, and flipped. The serene peace of the wintry fields was shattered as it plowed thunderously through a fence and into a stand of young trees, finally coming to a rending halt with all wheels up.

Within the battered cab, the dying radioman fought off the darkness, trying to find the mike-button to report.

"Headless—" His voice was feeble, and blood frothed in his throat. "The rider was headless . . . *and he threw his head at me!* He—"

And then he died.

And elsewhere . . . The soldiers stood their posts with increased alertness that night, eyes straining to pierce the darkness and ears straining for any untoward sound. The detectormen within the blockhouses amid the pale glow of their instruments suddenly became the most important men in camp, probing and prying at the surrounding terrain with immaterial fingers and unseeable eyes. The fence flickered softly, transmitting a hum of power along its death-dealing length to the soldiers walking sentry.

It did them no good. All their alertness, all their precautions—all for naught. While their commander slept soundly in his camp bed, confident in his men's readiness, secure in their ability to meet and defeat anything the sleeping planet had to offer, the sentries collapsed one by one with no fuss and with little sound other than the clatter of dropped weapons. Faint puffs of vapor, invisible in the night, came drifting on the prevailing wind currents and seeped through the gun-slits of the blockhouses. Moments later, the gunners were unconscious on their mounts and the detectormen slumped senseless in their chairs.

When all was still save the whispering breeze, the perimeter fence flared once, briefly, as some object made contact with it, and then the flow of power was smooth once more. There came no shouts of alarm, no rasping bullhorns, no pounding feet. There had been none to notice the flare, none to give the necessary orders, none to carry them out had they been given.

Within a very few seconds, the fence's generators were

quietly shut off and a host of shadow-shapes came drifting in out of the night as unobtrusively and silently as had come the vapor. Stun-guns sparked briefly over the bed-trenches of the bulk of the encampment's complement to insure their continued slumber, and only one or two of the soldiers so much as twitched or grunted when the stun-bolts hit them.

A sleepy radio operator in the HQ hut noticed that a certain undertone of static had vanished from his set as disembodied voices conversed back and forth over the air waves, and that voices far away now came more clearly, but the implication failed to register. A certain amount of static had to be endured if the radio set was to be surrounded by the electric protection of the fence; once that static disappeared, it meant the fence was no longer operating. But it had been a long watch, the conversation of his fellows at similar posts had been routine and hypnotic, and he was expecting his relief man's arrival almost any time now—

The door behind him opened.

"About time," he said without turning. "I was beginning to wonder when you—"

He never completed his sentence. Something sparkled and hummed in the doorway and his body went limp, his drowsy mind relaxing into unconsciousness.

And still elsewhere . . . a pair of troopers, bundled up in heavy winter gear but still miserable, stood guard over a command flivver parked in a street beside a bomb shelter entrance.

"This," opined the taller one, "is madness. Why should we freeze to death just to watch their ship while they're inside trying to prove us the victims of hallucinations?"

"Because," said the shorter, "they are the mighty Imperial Intelligence and we but lowly foot-sloggers. And also"—he grinned bleakly—"because they do not want the 'orange balloons' and other nasty little figments of our overwrought imagination running off with their transportation and leaving them stranded."

"Orange balloons!" The tall trooper snorted. "I know what I saw—right up there." He pointed to a balcony some twenty levels above the street, at present almost obscured by falling snow. "And it wasn't any balloon. It was—something else."

"Don't tell me," said the short man. "Tell them." He hunched his neck deeper into his parka. All around them the snow drove silently, silently through the cold gray streets, and a bitter little breeze caused it to eddy and swirl at the bases of the huge, brooding buildings. Drifts had buried the Terran traffic stalled on the street, and the whole sprawling city seemed to grow out of a snowfield.

"What a Sirri-forsaken world," the tall trooper remarked. "No wonder the Rekks are so foul-tempered and unco-operative."

"And their ghosts so restless," appended the other.



"How'd you like trying to take the Sleep Eternal if your grave was as cold as graves must be here?"

The tall trooper shuddered. "I wish you wouldn't say things like that. I—"

"Look!"

He looked, stiffened, began to fumble frantically at the rifle slung over his shoulder with numb fingers. "Here we go again!"

"Yio—only this time the Intelligence boys get to see it, too." There was a dismal satisfaction in the way it was said. He went running toward the bomb shelter, slipping and sliding on the uncertain footing, leaving his partner alone with this latest manifestation.

The snow continued to fall in ragged white blankets, and the wind to moan softly around the corners—but *where the snow had lain for days, it was melting*. Melting and becoming water and draining away before the temperature could freeze it back into ice.

And, in every tall spire, in every shorter edifice, one by one and by the scores and hundreds, all across the city . . .

The lights were coming on.

And so it went. The central planet of the three followed its course around the sun, and turned upon its axis, and to its invaders its peaceful slumber became the background for a thousand bad dreams. Unease matured into out-and-out fear, and the fear become near-panic, and the panic began to insinuate its tendrils into every bomb shelter, every stronghold, every spaceship across its length and breadth. Effervescent blue glowworms six feet in length began to haunt the nights of Venus, and Mars had its own special breed of nightlife, too, and the panic was no longer confined to a single planet, but spread . . .

On Terra, a troopship in France was besieged by phantom soldiers wearing little tin hats and carrying bulky rifles with knives on the end. The ship pulled up its ramps and unlimbered its space guns and did as much damage to the besiegers as blowing soap bubbles would have, and finally gave up when it had blackened a suitable stretch of countryside and settled down under tight security to wait out the siege.

Also on Terra, Sirri was deserted by His Faithful at a twilight service in a Terran park when lookouts detected the peculiar orange moons apparently sneaking up on the gathering. The soldiers fled and the chaplain did likewise, priestly robes flapping like the wings of some ungainly bird in his precipitate flight. When they were sure the moons were not pursuing, they halted and congratulated each other upon escaping an awful reckoning.

On Venus, the undulating glowworms put to rout a similar service, the incident being notable in that Gauskarr, Supreme Commander of Venusian Occupational Forces, had been present and had put to the lie once and for all the old rumor that ranking brass was soft and out of condition by setting the congregation a blistering pace away from the immediate vicinity.

On Mars, squadrons of the tiny white lights that had been present at the slaughter of the 2080th Infantry's Second Battalion in Canali patrolled the highways and byways, chasing everything that would run and fleeing from everything that pursued.

And on all three planets there were certain ululating howls in the night, echoing weirdly among the soaring architecture of a technological age, and creaking sounds as of doors being opened, and thuds as of doors being closed, and thumps and bumps and the rattle of chains and tread of unseen feet.

The three planets turned upon their axes, and every gathering of aliens had their share of nightfalls and witching hours and false dawns, and as the blood-congealing visitations during those periods increased and diversified, the troopers grew by the clock more fearful and restive, and their officers more harried, and the brass hats more frantic.

The invaded inhabitants of the three planets might be sleeping, but it was the invaders that were having the nightmares.

## XXVIII

"As I peruse these reports," said Security Underchief Blalir, "I am increasingly aware of an overpowering trend."

"So am I," responded Martak Sarno bitterly. "We're being run off the planet by spooks."

The Underchief gestured tiredly. "Yes . . . but I don't mean that."

"What then?"

Blalir tapped the reports with a forefinger. "These incidents seem to occur in waves. Each time these *ghosts*—he grimaced slightly—"appear, they show new sophistication of technique. Qurior's Pen, for example, was simply wiped out—but this latest attack on a Pen is quite a different matter. One moment the sentries are walking their rounds and the detectormen are watching their instruments—and the next, it is morning and every man in camp wakes up to find himself stark naked in a big pile with his fellows in the center of camp. The buildings are smashed—and not a gun, not a flivver, not a *shirt* is to be found. But no one's throat is cut. While irritating, the stunt is intrinsically harmless. Such phenomena are called"—he consulted his notes—"poltergeist phenomena, common in the history of this planet. It means something like prankish ghost."

"An embarrassing prank for those involved, I'll bet," ventured Sarno.

"Perhaps. But *frightening* might be a better word. What could be more frightening than to awaken upon an alien world stripped of every defense—right down to underwear—you possess? And with the full knowledge that all those defenses had not helped to keep you from getting into this predicament in the first place?" The Underchief said.

"And that others who had found themselves in a like position didn't wake up at all, eh?"

"Precisely. That is what I meant by sophistication: two hundred and twenty *frightened* men are infinitely more damaging than a like number of *dead* ones. Dead men you simply bury and make adjustments to get along without; frightened ones you must continue to utilize, or end up with nobody left to do what must be done."

"And meanwhile the fear spreads like a contagious virus through the ranks."

"Yes."

"And the Quartermaster is hard-pressed to re-supply the missing equipment."

"Again correct."

"So where does that leave us?"

"In the middle. We know that *something* is capable of slitting throats and getting away unseen; we know that *something* can put to sleep, disarm, disrobe and disassemble a camp without betraying itself; we know that *something* is responsible for all these manifestations that have the troops on the verge of open rebellion—but we don't know *what*. We don't have any concrete proof that the Federation has a hand in it—so we don't dare question them about it for fear of disclosing something they don't already know and sending the whole game up in flames. In fact, we don't have any concrete proof of *anything*."

"You are not," informed Sarno, "telling me anything I don't already know."

"I am aware of that," the Underchief replied patiently. "You know every bit as much as I do—which is nothing. I have driven my men until they're dead on their feet, have set up numberless camera-traps and staked out countless likely-seeming areas for a visitation. And what came of it? One agent was at Curik's Pen when that—headless horseman—came galloping through the barrier-fence and started chasing soldiers around inside. Four ran into their own fence and were fried; my agent and six others were burned by others trying to stop that thing with searfire. Another agent happened to be at Zalaguester's Pen when it was doped and stripped. Result: my agent woke up naked right along with the rest of them."

Sarno smiled in spite of himself. "That," he said, "ought to set Intelligence prestige back about ten centuries."

"Maybe." Blalir didn't seem to care one way or the other.

"Surely your camera-traps got *something*?"

"Oh, yes—wonderful shots of those things you call *jack-o'-lanterns*, and glowing blue worms and flocks of little white lights. And of searfire going right through them, and some good candid stuff of tough paratroopers fleeing like frightened children."

"But nothing important?"

"Nothing." He gestured again. "It's almost as if . . . I hate to say this, but it's so . . . it's almost as if our every

move were being watched, interpreted and countered. We found cameras smashed, and cameras with film exposed, and in some cases the cameras were just gone."

"You sound as if you're beginning to believe in ghosts yourself," Sarno observed bitingly.

"Why not?" Blalir shrugged. "I've seen stranger things than ghosts in my years with Intelligence—and come to the conclusion that nothing is impossible. So why not?" He didn't seem overly dismayed at the prospect.

Sarno said as much.

Again the shrug. "Why should I be? If it's so, its so—and my emotional reaction to the problem is not going to alter it one iota."

"Well, that's an admirable attitude," the general admitted, "but it isn't helping us settle this thing. You, personally, were in New York City when all the lights came on and the snow melted off the streets. What did you see?"

A third shrug, and a slight twist of the mouth as if even the effort of lifting his shoulders was begrudged. "I saw the lights come on—and the snow melt. Oh"—he raised a placating hand to head off the other's comment—"we did the Space Troops act in fine style, rushing around from power station to power station, guns drawn and teeth bared. But all we saw were switches turned on where they had been off. No jack-o'-lanterns, no headless horsemen, no phantom soldiers or spooks of any variety whatsoever. Just switches *on* where they had been *off*."

"And so?"

"And so we turned the switches back off, got a company to seal off the surrounding areas, and went through them with a fine-tooth comb. We found, as usual, nothing—nothing at all. One does not catch quicksilver in a seine."

"What about that ship in France—the *Kalistra*, where this whole mess started?"

"Oh—the ancient soldiers of Terra?"

"Yes. What did the scan beams show?"

"Nothing. Every time we turned on a scanner in the neighborhood, they vanished. Leave the scanner off, they'd reappear. We tried surprising them with random timing on the scan sweeps—and that didn't work, either. Their reactions are the fastest I've ever run up against."

"Which suggests two things to me," said Sarno. "One, they're afraid of detection—they have something to hide. Two—those reflexes *could* be robotic."

"On the other hand, they could be allergic to the scanner beams," Blair countered. "As to robotic reflexes—we've poked and pried at more robots than I care to remember. They're clean; all we found was a vague sort of puzzlement as to where the humans had gone and what we were doing here, coupled with a sort of wish that things would get back to normal so they could resume whatever their workaday chores happened to be. Besides—whoever heard of disappearing robots?"

"Whoever heard of ghosts laying siege to a spaceship?" Sarno retorted.

"Playing with words," reproved the Underchief gently, "gets us no closer to the solution of our problem."

"And neither, apparently, does your fumble-fingered bumbling." Sarno's voice was cold. He stood up, planted his bulk solidly on both feet. "Until you can give me something definite to work on, stop wasting my time."

The Underchief's eyebrows lifted just a trifle as he uncoiled from his own seat. "Insults, like word-banding, will get us exactly nowhere," he commented. His voice held a matching chill that brought Sarno up short. He had almost forgotten that, with Sjilla gone, Blalir had automatically received Sjilla's vacated post—and that, as Acting Security Chief and in absence of orders from home, he was not required to take abuse of a mere expeditionary commander such as himself.

*Great*, he told himself as the Underchief left the cabin. *Just great. Now I've got an enemy within the ranks as well as all those without.* Belatedly he realized that he had meant to ask Blalir if there had been any word from Atlanta on Donovan and the others. Not that it really mattered. Blanatta would have informed him if there had been. He felt a sudden surge of warmth for his old police chief. Even when things looked blackest, Blanatta's faith in his ability to get them through was unshaken. Right now, Blanatta was minding the fleet and keeping watch over the ghost happenings—and Blalir, whatever his personal feelings and despite his resemblance to an undernourished corpse, was competent. His command was in good hands—and, for the moment at least, the spooks were quiet.

He yawned broadly. Which meant, perhaps, that he could sneak a little sleep. He unbuckled his gun belt, loosened his tunic and turned in, not even bothering to take off his boots.

An hour later and he was on the bridge, all thought of sleep driven from his head, straining to hear a distant voice through a constant blather of static.

"Sjilla," he called. And then again, louder, "Sjilla!"

The interference lifted momentarily and a voice said clearly, "Here, general."

"I thought you were dead!"

"One of the hazards of my occupation," was the wry rejoinder. "People give me up too soon."

"Where are you?"

"I'm—" The static came back, worse than before. Through gaps in the noise Sarno caught snatches of sentences: "... Attacked by robots in Atlanta ... Got caught by Rierson. Donovan ..."

He seized eagerly on that. "Donovan! What about Donovan? Is he dead?"

"No." The reply to that was clearly understandable. "But he's out of commission. I've got his legs."

Came a static-filled chuckle. "Grotesque, ain't it?"

"Your voice sounds funny."

"So does yours—but I caught the backwash of a flamer bolt across the face. What's *your* excuse?"

"You seem in excellent spirits," observed the general. He himself was supremely happy. He had the Delegation where he wanted it—and by proxy the Federation—and now Sjilla was back from the dead. And Donovan was out of circulation. Let the phantoms beware!

"I ought to. Incidentally, I got the Spook of Baxter."  
"What? How?"

"How would take a long time telling, and this contact is terrible. Suffice it to say that I have him neatly tied to a stretcher and ready for delivery."

"Excellent. And when may I expect delivery?"

The static obscured the reply.

"I didn't hear that last," he said, and waited. There was no answer. He jabbed the talk-button anxiously. "Sjilla?"

"... Still with you, general—but just barely. As to ... delivery. There's one more ... to do before I ... the neatly-wrapped bundle to you." The interference worsened momentarily, then lifted altogether. "There are some loose ends that need tying up. Will I have your co-operation?"

"Absolutely. There's something else that needs taking care of?"

"*Something* about describes it, general. *Something* following me, sniping at me. It's been after us ever since I got away from Rierson and his robots. It got Quiror—he'd escaped with me—and it got two riflemen. All I've got left is a pair of troopers and a flivver pilot."

"Robots?" Sarno questioned. "That's the second time you've mentioned robots. What about them?"

"Well ... Rierson got the jump on me in Atlanta. He armed the robot-staff of a department store and smashed that Pen good. But I took care of that when I nailed him—and whatever's after me now isn't robots, and it isn't a figment of Donovan's imagination. Pipe-dreams don't slit people's throats while they sleep."

Sarno felt a nasty thrill along his spine. "Is that what's happening?"

"It is—though I know you'll find it hard to believe ..."

"No," said Sarno. He felt suddenly very old. "No, it isn't hard to believe at all."

"What do you mean by that?"

He told him, wasting no words. When he'd finished, there was a long silence. Then, "So it isn't a bad dream, after all—it's really happening."

"It's happening, all right—I can attest to that."

"In that case"—Sjilla's voice regained its briskness—"I'm going to try it. But I'll need full co-operation."

"Try what? And I've already said you'll have full co-operation."

"Try something that until just this moment seemed utter nonsense. Try a little counter-sorcery, you might call it. But I've got to set a stage."

"Just say the word and you'll have a thousand soldiers—or two, or three."

"Thanks, general, but that's not the kind of co-operation I'll need."

"Name it then." Martak Sarno was in an expansive mood.

"You know where *El Scorpio* is?"

"El What?"

"*El Scorpio*—Planetary Defense Center 10."

"Oh. Somewhere on the North American Continent, isn't it?"

"Yes."

"What about it?"

Static. Then ". . . I want it set up for me. Whatever's dogging us, I want to lead it into a space wide enough that it'll have to make its presence known before it strikes."

"You shall have it," promised Sarno. "There'll be two thousand troopers awaiting you . . ."

"No!"

He was taken aback by the other's vehemence. "Why not?"

"Because . . . because two thousand mud-faces will just get in my way—and each other's. How many men on the base now, by the way?"

"A moment." Sarno turned, consulted his battle board, his eyes running swiftly down the twinkling rows of lights. Then, "Approximately two hundred. That includes the officers and the technicians mapping its defenses."

"That's plenty of manpower. Now, here's what I want done . . ."

The static flooded back, stayed longer than usual. Sarno waited impatiently until it lifted. "Sjilla—still there?"

"Still here."

"I didn't catch that last. Want to repeat it?"

"You can bet your last brass button I do. And Sarno? Do it my way, huh? Right down to the last detail? Otherwise, I won't be responsible for what happens."

"And this way you will?"

"This way I will—and I think I can guarantee you the final cessation of hostile activities, both temporal and other-worldly."

"You *think*." Sarno underlined the word.

"Yes, I *think*," Sjilla came back testily, the strangeness of his voice accentuated. "Or would you rather do it your way? In such case I'd rather *not* think. You know how mass slaughter appalls me."

"I do?"

"You do now. Now . . . do I give you my plan, or do we do it your way?"

"Don't get upset," soothed the general. "You've always gotten results before—and you got the Spook of Baxter this time, in spite of the Pen massacre. I've no cause to doubt your judgment. We do it your way."

"Good!" That approval was distorted by returning interference. "Listen closely. Contact is fading; I won't have time to say it twice."

"I'm listening."

"All right. Incidentally, if I'm on the right track, those

supernatural manifestations you spoke of should cease shortly. They'll be coming after me. Now here's what I want done . . ." The voice went into a quick, concise detailing, interspersed with bursts of static and an alarming fade-out of volume that turned his crisp tones into a rasping whisper. Finally it stopped altogether and Sarno turned away from the radio. The contact was broken, but not before Sjilla had said what he wanted done. He had it all figured, right down to requesting that warships in patrolling orbit be on standby to come down and lend support if whatever appeared happened to be vulnerable to energy weapons and at the same time proved too much for the token base guard to handle.

Sarno shook his head in unbegrudging admiration. At the very start, even before the first robot Dust ships had left for Terra, Sjilla had come to his fledgling command with the highest possible recommendations. And he had long since come to the conclusion that Intelligence H. Q. had known whereof they spoke.

Never once had he failed to produce.

## XXIX

The soldiers occupied a wind-eroded ridge that gave them a sweeping view of the grassy plains rolling away to the horizon on all hands, their positions only partially entrenched and ill-concealed by hastily rigged camouflage netting. The three prefab autogun bunkers spaced evenly along their fan-shaped line stuck up like sore thumbs in the tall, waving prairie grass.

The sky arched high above in a myriad of cold winter colors as the sun sank toward the western horizon, and the ever-blowing wind began to bite at exposed flesh with fresh vigor. Night came marching toward them across the undulating grasslands and the first stars were already in evidence, burning with a hard, cold brilliance. Nine *siveb* behind them clustered a group of tiny buildings dwarfed by the immensity of empty space all around. Buildings that were in reality cavernous hangars and reactors and barracks situated in the center of a vast space-field easily capable of holding and servicing half an Imperial fleet at a time.

The platoon was here to protect those buildings and the other nine-tenths of the Planetary Defense Center known as *El Scorpio* which, like an iceberg, lay hidden beneath the surface. To protect them from some as yet unspecified danger that might at any moment come, like the night, marching out of the east. The soldiers were acutely aware of their vulnerability here, and their eyes were never still, searching the uniform monotony of the nearer swells and dips in the terrain with narrowed gaze. There were no distinctions made—any movement in that vast area of utter, eerie quietitude would draw sudden and heavy fire. If it were only a trick of wind and shadow, or one of those *jakrabbis* that had not succumbed to the Dust . . . well, nothing was lost but a few rounds of ammunition. If it was *not* the wind or a *jakrabb*i, then they

had avoided being massacred unawares. So they stared until their eyes began to play tricks and they gripped their weapons until their hands ached.

"We're exposed here—" muttered a rifleman to his partner, blowing on his trigger hand to warm it. "Sitting up like pips in a shooting gallery."

"That's the idea," returned his partner, without lowering his distance-lenses. "That's the whole idea."

"I don't like it!"

"Who does?" The other continued to scan the vector assigned them.

"It gives me the creeps . . . all this emptiness! And that wind! It just blows and blows—"

Came a derisive snort from the speaker's left. "What d'you expect it to do? Sing you a lullaby?"

The rifleman turned. It was the loader from the autogun emplacement further along. "What are you doing here, Vas? If the lieutenant catches you—"

"He won't." Vas jerked a thumb at a small, pyramid-shaped hump at the base of the ridge. "He's in his tent, catching some shut-eye."

"Has anything else been heard from Sjilla?"

"Nothing. Just that one radio message and then nothing."

"I don't like it—not one little bit. On the say-so of one little radio message, we're scattered all over the state of Texas, seems like, waiting to fight some unnamed and unspecified enemy. I don't like it . . . the whole thing smells funny."

"Don't like anything, this one," said the second rifleman, lowering his lenses. "Got it all figured out, he has. Wonder why he isn't in command instead of Sarno?"

"I still say," the worrier responded doggedly, "that Sarno shouldn't act on the instructions of one short, mysterious radio-call. 'No reinforcements moved in,' it said. 'Deploy what you have to cover all approaches. Bunch your officers and technicians in the most protected building with an armed guard, but don't attempt to fly them out.'" He gestured disgustedly. "What kind of goings-on are those, I ask you?"

"If I could understand it, I wouldn't be saddled with the likes of you as a partner," opined the worrier's partner. "Leave it to the officers—they know what they're doing."

"Yio? Like they knew in Atlanta, eh? And Portland, and Chicago and Paris and all the other cities—how about those?"

"Now that," declared his partner, "is enough! I don't even want to listen to such things—not as touchy as the brass are about mentioning them."

"That's just it. *Why* are they so touchy?"

"I couldn't tell you," confessed the loader. "But"—his voice dropped significantly—"you know what that legless Rekk, Donovan, had to say about it."

"Space-breeze!" defined the second rifleman contemptuously. "Who believes in spooks?"

"I'll bet I know a few who do."

"Who, for instance?" The second rifleman demanded.

"The men who were on liberty in Nairobi and Portland and Sydney and Canali—and who are now in refrigerated boxes awaiting shipment home. The ones who came up against the Spook of Baxter—and that headless thing—and those orange balls and blue worms and white lights."

The skeptical rifleman hefted his weapon. "Let a spook show up around here and we'll see whether he can be killed or not. All I ask is one good, clean shot at . . ." His voice trailed off and he sat as one transfixed.

The grass on the third rise agitated wildly, moving against the push of the wind. Something was advancing on them, shaking the grass, but there was nothing to be seen.

The first rifleman gargled inarticulately, threw up his rifle and squirted a hose of flame at the movement. Startled shouts arose along the line, but he paid them no heed. His first shot had gone wide; he corrected and fired again. The unseen approacher accelerated its pace. The rifleman's partner unfroze and twin lances of fire crackled out. The thing turned at right angles and really started moving. Their fire fell behind. The dry grass began to burn luridly against the deepening twilight where their shots landed.

By now they could catch fleeting glimpses of something above the grass, moving upwind at an incredible pace. Other guns opened up, and the loader went racing madly back to his bunker. His voice sounded thin and lost above the wind.

"Re! Re! *Blast* it, Re!"

Re obligingly blasted it. The autogun coughed to brilliant life, swept after the still unidentified fleeing thing in a flat, vicious arc. Caught up with it and passed it. And stopped firing. A long line of alternately flaming and smoldering grass marked the path of flight. The rifles, which had ceased firing when the autogun began, remained silent. Into the returned stillness seeped the moaning of the bitter wind. The flames danced where searfire had breathed hotly upon the brittle grasses; the untouched stems nodded in cadence with the wind. The soldiers waited.

The lieutenant came out of his tent and up the rearward slope of their position on the dead run, voiced sharp inquiries and then barked a quick command. Five soldiers climbed out of their entrenchments and dog-trotted toward where the autogun had stopped firing, fanning out into a skirmish line. Their fellows on the ridge prepared to lay down covering fire.

There were long-drawn moments while the soldiers searched the area, aided by hand torches and the strengthening glow of the grass fire, and then a corporal gave a shout and lifted something above his head. They came back at a faster pace than they had used going out, and brought up before the lieutenant. He took the corporal's prize from him, swore loudly.

"A *jakrabbi!*" his voice came faintly down the lines.

"A Sirri-accursed longears!" He flung the carcass away from him down the slope and unsnapped a loud-hailer from his belt.

"*All right men.*" His mechanically-augmented voice had a strange, hollow ring in the blowing vastness. "*You killed a jakrabbi—nothing more. But you have shown you were alert. I commend you.*" He paused for a moment, went on. "*That alertness must be maintained. I have just heard from Major Corvun that Security Chief Sjilla is expected momentarily. Consequently, the danger he spoke of is increased. Carry on.*" He replaced the hailer and started back for his tent.

"Look!" That was the first rifleman—the worrier—nudging his partner in the ribs and pointing at the sky. His partner looked. "Not there—over near the bright star."

Then his partner saw it. "A flivver!"

"Yio—and circling in to land."

The word ran quickly along the line, and the lieutenant, too, glanced up. As the tiny sliver of silver drifted down toward the distant buildings of *El Scorpio*, he unlimbered his hailer a second time.

"*That will be Sjilla. From now on, anything can happen. Remember: stay alert.*"

Then he continued toward his tent without another look at the airship. The lieutenant was dead-tired—too much so to get excited over anything short of the prospect of a hot bath, a warm bed and plenty of time to enjoy both.

The first rifleman settled back into his shallow bed-cum-entrenchment and twisted until he could again survey the rapidly-darkening slopes. A chill for which the arctic wind was not entirely responsible passed over his frame, and he tugged half of his open sleepbag up around his shoulders.

"Any time now," he said. "And from any direction."

"Yio," agreed his partner. "Any time." He raised the distance lenses once more and began to traverse the slopes nearest them. "Wonder how I'll get mine—from an orange balloon, or a glowworm?" He tried to make it a joke, but it didn't sound funny.

"I don't know, but I've got a feeling we'll find out pretty soon now."

Behind them, the big command flivver settled in smoothly among the buildings they were here on the ridge to defend.

### XXX

The flivver came to rest before an aboveground administration office, and there was a delegation waiting to meet it. Major Corvun stood at the head of the little knot of officers, his hand tentatively on his gun butt. His inferiors struck like poses. Off across the rolling sea of grass to the east, a reddish glow strengthened in the dusk. Corvun shook his head. Lieutenant Hanosork's platoon was jumpy this evening—but then who could

blame them? Sjilla's message had set everyone on edge—including Sarno, he'd wager.

The flivver's compartment door banged open to reveal a Lralan trooper with slung rifle. He dropped the craft's short ladder, descended to the ground and stood at attention.

The next figure to appear at the door bulked large as he ducked through and came down. Corvun's eyes widened. By all visible characteristics, the big man was a Terran—a Terran with a plastic bandage wrapped under his chin, over the top of his head and then several times around, turban-fashion. His clothes were colorful, loose-fitting and of obviously Terran cut; an alien rifle hung from his shoulder.

The trooper saluted smartly, and the big man returned it with a casual wave. Then he motioned back inside, said something and started across the pavement, hands in jacket pockets. The wind whipped his trouser legs as he approached, giving forth a faint popping sound.

Corvun snapped to attention, executed a classic salute. His junior officers imitated him. The big man took his hand out of his pocket, gave another of those casual waves. Corvun rankled for a moment, then chided himself for it; after all, Intelligence was hardly as tradition-steeped as the Infantry.

"Security Chief Sjilla?"

The big man nodded, flipped the lapel of his jacket. The both famous and infamous gold badge was pinned there.

"Major . . . ?" He raised inquiring eyebrows.

"Corvun, sir. Imperial Infantry, 503rd Division."

"Good. Major Corvun, you must forgive my slowness of speech"—it was true; his words came slowly and with obvious difficulty—"but I was slightly singed by a flamer several days back."

"I will have a medico sent for."

"Never mind—the wound is minor. That's my self-diagnosis." The big man smiled. "We pick up all sorts of tricks in this racket."

"I can imagine."

"But we are not here to exchange pleasantries," he went on in a crisper tone. He turned back toward the ship. Two soldiers were lifting down a stretcher. A fat individual wearing the comet of the flying corps looked on, a bulging bundle tucked under one arm and a sear pistol in the free hand. "The Rekk on the stretcher is my prisoner," he said, "You have heard of him referred to in the past as 'The Spook of Baxter.' He is no spook; he is as mortal as you or I. But he is highly dangerous. That's why I've got him lashed securely to that stretcher. I figure he can do less harm that way."

"What harm could he do?" Corvun asked curiously.

The big man shrugged. "I don't know. But let him get one arm loose and we'll all find out soon enough." He smiled at the major enigmatically. "James Rierison is a holy terror once he gets started. But I know all his tricks." Again the strange smile. "I am almost intimate with them,

you might say. Therefore, I do not wish him locked away, but kept right in my sight, bound just as he is now. If by any chance he manages to break loose—don't ask me how—do not hesitate to shoot. And shoot to kill. This one is very, very dangerous."

The troopers approached with the stretcher, paused before them. Corvun looked down at the prostrate form. The Terran was straining at his gag, the flesh showing whitely around that impediment to speech. Muffled noises came from behind the gag; his throat worked convulsively.

"A very vicious personality," observed the big man. "Terrible temper."

The other's eyes bugged with his efforts to speak, and the muffled sounds increased in volume.

"Typical Terran," commented Corvun judiciously. At that, the Terran subsided and closed his eyes.

"Why . . . he seems to be crying!" exclaimed the major.

"Repenting his former sins and wickedness, no doubt," the big man said. The Terran opened his eyes and stared at him venomously.

"Brrr!" The major shivered. "If looks could kill . . ."

"And they just might, orange-face."

He whirled, but there was only the flivver pilot, his face lost in shadow, a bland smile on his features.

"Down here, stupid."

He looked down. A Terran was glaring up at him from about belt-buckle level, standing with his knuckles braced on the pavement—standing, as Corvun realized, on the stumps of his legs. A superstitious horror overcame him.

"This, of course, is Donovan," said the big man, not at all affected by the glare. "Don't let him worry you."

"No, indeedy—don't do that," mimicked the other. "Let Grandpa worry you—and he'll be doing that soon enough. That I guarantee!" He looked at the Security Chief. "Well . . . do we go inside to wait for him, or stand out here and freeze to death?"

"We go in." He looked at Corvun. "Have some men go out to the flivver. They'll find a number of metal containers in the troop compartment. I want them."

"Yes, sir. Anything else, sir?"

"Yes . . . let's get in out of this blasted wind. Lead me to where the rest of your officers and technicians are situated."

"Sir, all my officers besides the lieutenants out with their platoons are right here. Only the technicians are inside, and they are down in the main control center studying relays and circuits. I felt that we, as officers of Empire, should meet you."

"A noble gesture," the big man acknowledged. "But a rash one. You could have been . . ."

"Don't think walls will protect you," Donovan chipped in. "They won't."

"Perhaps not—we shall see." He thrust his hands back in his pockets. "Very well, then—lead us to the central control area." He started forward.

"Your pardon, sir . . . , but could . . ." Major Corvun ventured.

He stopped. "Yes, what is it?"

"Sir—I have no soldiers to fetch the containers along. Could two of my officers perhaps carry the stretcher while you sent your two men back?"

"Absolutely not! It won't hurt a couple of officers to do something besides warm a chair. Now let's go."

Corvun smarted under the insult, but swallowed his pride. This man was favored by Sarno—and that tiny shield of gold on his jacket gave him the right to say anything he wished, to anybody, at any time. He nodded to the two lowest rankers present. "Carry out the Security Chief's order." He placed stress on Sjilla's title, hoping they would see his position and make no ill-considered remark.

They saluted simultaneously, went to do Sjilla's bidding, and—knowing Infantry officers' volatile temperament—he was grateful.

"Well," said Sjilla impatiently, "what are we waiting for? Let's go."

"Yes, sir. This way."

He led them across the pavement through the icy dusk, a ghoulish parade in the failing light.

Bound tightly on his stretcher, the individual who had been relegated to the role of James Rierison, captured Spook, writhed in frustration."

### XXXI

When the van of the enemy fleet smashed through the thin line of picket ships riding in Pluto's orbit and broke inward toward the sun, Central Control, Canada, flashed a Condition Red Maximum to all points. Colonel Randolph Dumas, commander of PDC-10—*El Scorpio*—noted the message almost instantly and ordered the base's bomb screens raised and its short-range interceptors aloft. Then he made a careful check of all systems and found his command fully prepared to make things hot for the invaders when they got within range of the missiles and beam projectors that gave the Scorpion its sting.

Satisfied that all was as well as it could be under the circumstances, he leaned back in his command chair and ordered his robotic steward to fetch a cup of coffee pre-cooled to the forty-nine second tolerance level. After all, he had fully one hundred seconds before further action was required, and he *had* been waked from a sound and dreamless sleep not three minutes before. Of course commanders more disposed to worry would have spent the time rechecking with infinite care to the boundless irritation of their men, but Dumas was not of that breed. From a more cautious point of view, he squandered time shamelessly.

He permitted himself the luxury of a small yawn, chided himself gently. Must be getting old; he still felt sleepy. The coffee would help. Where in blazes *was* that steward, anyway . . . ?

He awoke.

For a full three seconds by the clock mounted into the ceiling above his bed he lay quite still and watched the sweep hand sweep along. By the fourth second he was sitting bolt upright, and by the fifth second he was cursing himself for reacting without first considering possibilities.

The nearest thing to panic he had felt since he began his well-ordered military existence at the Academy twenty-nine years ago came welling up inside him and it took a concerted effort of will and all the cortical training he had ever received to overcome it and accept the obvious fact.

*He had fallen asleep at his post.*

With interceptors aloft, screens up—with a hundred highly-trained men in the control room awaiting his order to unleash awesome energies against the invading phalanx of enemy vessels—with Terra buckling down to receive the first Condition Red Maximum assault in its stellar history, he had gone to sleep on the job.

Once he had forced himself to accept that, and all the unthinkable ramifications it embraced, the panic drained away and he was himself again. He turned his attention outward—

And received another nasty shock.

Ranged before him in his bedroom—for that was where he was, he had known from the first moment of awareness—was the most fantastic assortment of characters he'd ever seen. There was a big man with a rifle on his shoulder, another man standing complacently on the stumps of his legs—and there were a half-dozen Larrys. Two of them were bending over a third Terran lying on a stretcher; another—a pot-bellied flier, by his uniform—held a gun casually pointed at the legless man's head. The other three—a major and two captains—simply stood and stared at him.

"Do you understand Llralan?" inquired the big man.

Dumas nodded mutely, suddenly conscious of a throbbing headache.

"Good." He turned to the Llralan major. "Give your little speech, major."

"Yes, sir." The major took a pace forward while Dumas let it sink in that the big Terran was giving the Llralan orders and that the Llralan was responding as he would to those of an Imperial general.

"You are a prisoner of Empire," he was informed flatly. "Terra, Venus and Mars are in the hands of the Empire. Due to the use of a new and totally unprecedented weapon the inhabitants of these three planets are in a deep, coma-like sleep. This has permitted us a virtually bloodless victory, and placed us in an extremely favorable position to bargain for concessions on the part of the Federation, holding the inhabitants of these worlds hostage. You are advised to co-operate fully and offer no resistance, since such resistance would be futile and would only bring retaliations against the civilian populace." He stepped back.

"Good enough, Security Chief?" the major asked.

"Good enough, major," said the big man. He looked at Dumas. "I can see the wheels going round, colonel. Excellent—that's what I want them to do. Have you fully digested the information given you, in the best accepted human-computer fashion?"

"I have digested the information," responded Dumas, nettled by the other's slighting reference to acceptance-response conditioning.

"Good. Then accept this much more: the vehicle by which this weapon was delivered was the series of supposed nuisance raids by robotic ships over the past year. When the saturation level was reached, the pre-seeding was followed up by a full-strength invasion. The weapon itself consists of an extract from a flower found on the Imperial province-world Risstair."

"Sounds incredible," commented the colonel.

"But true," countered the big man. "Ready to go on?"

"By all means."

"All right . . . every single person on the three planets was supposed to succumb more or less simultaneously about a month ago. The overwhelming majority did just that—but there were notable exceptions. Donovan, there—the legless man—was one. He did not collapse. Further, he killed six or seven soldiers before his capture, then proceeded to scare the wits out of the more superstitious among the invaders with tales of a vengeful grandfather's ghost that would react unfavorably to his being harmed in any way. Got all that?"

Dumas waited a long time before answering, and then replied slowly. "Got it."

"Good."

"Look . . . what's all this leading up to?" He was very relieved that his original impression had been false, that he had not failed in his duties, but this second set of circumstances was beginning to try even his ability to adapt and adjust on the spur of the moment.

"To the reason for your reawakening at this point in the proceedings."

"I see." He frowned. "Then there is a special reason?"

"There is."

"I can't see it."

"That's what I'm here for," said the big man patiently. He spoke with some difficulty. It stemmed, Dumas imagined, from the plastic bandaging around his face and head. "To explain it to you."

"And what makes me important enough to rate a personal explanation from a mocker?" Dumas wanted to know. He had already labeled the man as such before the major addressed him by his rank.

"Just this: You're the commander of *El Scorpio*."

"So what?"

"Let me ask you a theoretical question, colonel."

"All right . . . if you'll get me a glass of water first."

"Thirsty?"

"As hell."



"A natural symptom of the Reawakening," the big man assured him. "The sneezing will come later."

"Sneezing?"

"Yes. Quite a violent fit of it. Harmless but annoying. Destroys all vestiges of dignity, sneezing does. But back to that question I was going to ask. Suppose, colonel, that this base were fully staffed—excluding, of course, the interceptors. Suppose a full strength battle fleet of the Llralan Empire were sitting on these three worlds. What kind of damage could you do to it?"

He shrugged. "Wipe it out."

"That's what I thought. Makes you a very important person, theoretically, doesn't it?"

The Llralan major stirred uneasily. "Security Chief, I do not see where this is getting us—"

"You aren't meant to!" snapped the big man. "Now, shut up."

The major's features tightened and he drew himself up as though about to say something. Then he thought better of it and contented himself with staring at the ceiling. Dumas noted the byplay, filed it away for future reference. There was friction among the conquerors. Good. Maybe he could . . . but the mocker was speaking.

"Suppose, colonel, I told you that Donovan was not the only Unaffected who managed to cause the Larrys trouble? Suppose I told you a criminal attorney from Atlanta named James Rierison also got in a few licks—so much so that it began to be rumored that he was the phantom grandfather Donovan spoke of?"

"It could happen, I guess," Dumas conceded.

"Then suppose I told you that not only did he not get caught, but kept making such a nuisance of himself that Martak Sarno, supreme commander of Llralan forces here, sent his best man, Security Chief Drelig Sjilla, after him?"

"Modest, aren't you?"

"To a fault," was the solemn rejoinder. "Suppose I told you that this Rierison enlisted the help of domestic robots to attack and destroy an alien installation in the heart of Atlanta, and that Drelig Sjilla was reported among the missing, along with Donovan and three other Unaffecteds?"

"It's your tale," Dumas said. "So far, it signifies nothing."

"But you think it could all be possible?"

"I guess so. Can I have that water now?"

"One more item. Think you could stretch your credulity far enough to swallow it?"

"For a glass of water, yes."

"All right—suppose that Sjilla was captured by James Rierison, who freed Donovan and the others in the process, and suppose they hatched up a scheme to end the Occupation of Terra—the big man wasn't looking at him now, was instead regarding the major intently—"and suppose that scheme was perpetrated by the combined robots of three planets, and had as its purpose

convincing the Llralans that the undead of the solar system were revolting, and the men commanding the robots decided the best way to finish up would be to impersonate Llralans knowing how to stop the spooks long enough to get inside a PDC like *El Scorpio* and awaken the commanding officer and apprise him of the facts before dropping the masquerade and lowering the boom?"

Dumas had known it would happen. As soon as he had faced the weird menageries occupying his bedroom he had known it. His mind slipped. At least that was the only explanation his straining brain could come up with when the major mouthed a vulgar Llralan oath and grabbed for his seargun and one of the Llralans kneeling beside the stretcher-bound Terran jerked off a three-fingered glove to reveal a four-fingered hand and shot the major through the body with a short-barreled slug thrower produced from under his gray tunic.

And, while he was busily consigning his soul to madness, the legless Terran and the fat Llralan pilot fired together, and the two captains wilted in their tracks.

And then he sneezed. There was no warning, just a sudden, skull-tearing nasal explosion. And another.

The one called Donovan laughed out loud and then took a bundle from the fat pilot, unwrapped it to reveal a pair of artificial legs and began unfastening his pants.

*To put them, on, naturally,* Dumas thought wildly. *Why not?*

And then he sneezed again. Violently.

Before he had recovered, Donovan had indeed put on his legs and was in the process of getting back into his trousers. From the bundle that had contained his legs he drew a flame rifle and straightened, turning to the big man.

"We'll handle the others. They'll still be bunched in the control room. You soothe the colonel's fractured sensibilities."

"If you say so," returned the big man. "This is your show."

"You're right. It is."

He looked over to where the pair of troopers had divested themselves of their Llralan gloves, revealing hands startling white against the orange tint of their faces and gray of their uniforms, and were taking two more flame rifles from under the blanket that covered the prostrate Terran. The fat pilot removed his gloves, drew a second pistol to match the one he'd killed his captain with. He spoke for the first time.

"Well, Bradford, let's get on with it."

"Right." Donovan spoke to the big man. "The theatre suffered when you became a legal beagle," he said. "You mocked a mocker mocking a Terran without a slip."

"Yeah. Good luck out there."

"We won't need it; the chips are all on our side of the table now. Provided, that is, you can bring Dumas out of that stupor he's in."

"I'll try."

"You do that. Otherwise, this is all for nothing." He headed for the door. "Let's go, tigers. We're got some sheep to slaughter."

And out they went.

### XXXII

"This," said Randolph Dumas, "is the last word in radio jamming equipment." He stroked the smooth plastic sides of a cryptic coffin-shaped affair festooned with cables leading off in dozens of directions. The technician sitting in the cushioned bucket seat before the control console muffled a sneeze in his handkerchief, looked up and grinned.

"You bet, sir. When I cut loose on 'em, the only way they'll be able to communicate will be with smoke signals."

"And this," Dumas told him, moving to the next electronic gadget in the huge underground control complex, "is your baby, as of now."

"Thanks." Bradford Donovan slipped into the seat, picked up the headphones and put them into place.

Dumas leaned over, flipped a switch. "That ought to tune you in on the *Sulis-su-Banussen*. Does it?"

From the earphones seeped wailing, dirgelike music. Donovan nodded. "It does. Apparently, it's disk jockey time for the soldier boys. He twisted a knob marked *volume* experimentally, and the music flooded into the room. "That's their idea of popular music."

"It sounds like a funeral march!"

"It is. Theirs."

"Yeah. We hope. You ready?"

"Ready as I'll ever be."

"No prepared speech?"

"I'm going to do it off the top of my head—that's how I got this far. No need to change a winning way."

"I agree." Dumas indicated another switch, positioned just below a tiny indicator bulb. "When that glows red, hit the switch and you're on the air."

"Quaint," commented the truck driver, reaching for his microphone. "Get ready, Larrys, here I come. The Voice of Empire speaks tonight, in an unscheduled broadcast."

Dumas fingered a second indicator. "When this goes green, the bomb screens are up. When that happens, with those warships Rierson's got watching this place, it's going to start raining fire. That'll be our job; yours is scaring hell out of three million combat soldiers. Think you can do it?"

"I flatter myself that I've done it before this—and without benefit of all the equipment." Donovan settled the earphones comfortably, faced the instrument panel. "Let's get at it."

"Right. Good luck."

"Just keep the rain from running down the back of my neck, eh?" He triggered the mike experimentally, took a deep breath. He had started talking himself into

this chair back on the *Kalistra* what seemed like ages ago.

Now he was going to have to talk himself out.

Martak Sarno switched off the monitor, and the voice of an indignant Terran flicked into nothingness. Garcia had been talking for the better part of four hours now to the Federation High Command, wearily persisting in his recital of Llralan terms. At the other end, voices had changed periodically as the buck was passed from hand to hand, and Sarno calculated that Garcia was getting near the top of the chain of command. And each progressive voice had borne that much more helpless frustration.

He smiled grimly. "They protest loudly and at great length, Blanatta. That is a good sign: if they were going to do anything rash, they would accept what was said calmly and rationally. This way, when their voices are hoarse and their supply of invective exhausted on poor Garcia's undeserving head, they will start coming around. It'll be slow, and it'll be like pulling teeth, but the goals of our invasion are as good as won."

"Just as we always knew they would be, my general," responded Blanatta loyally.

"We did? Well, maybe . . . but now that it is almost done, I am not going to lie about it. I have had my doubts at times, Blanatta—grave doubts."

"My general!" The paunchy vice commander manifested horror. "It could not be!"

"But it can. When the Spook of Baxter escaped Colonel Zowal—when Quiror's Pen was annihilated—when we were besieged on all fronts by phantom killers and *poltergeists* and orange balloons and headless horsemen—" He sighed heavily. "But all that is ended now. The ghosts stopped walking just as Sjilla promised they would, and have not been seen since. Wonder how he . . . but no matter. Any word yet from Texas?"

"Major Corvun reported that Sjilla had contacted him and was arriving momentarily. That was last evening. Nothing since."

"Strange—"

"I thought so, my general. I asked the warships in patrol orbit if anything noticeable had occurred. Nothing. I did not dare send a flivver over for a closer look—not if Sjilla's instructions were to be carried out."

"No, of course not. Still . . . the time grows overlong. Any word from Corvun himself?"

"No."

"Hm-m-m. Well, we'll give Sjilla another two hours. If nothing happens by then, we'll see what we can do. Take command, Blanatta. I'm going below for a drink and a shower."

"Yes, my general."

He was in the shower when the raucous battle-horn began clamoring. For a moment he stood quite still, then leapfrogged out of the stall and started frantically drying himself.

The wall grid in his outer office came to life, began to bellow, "BATTLE STATIONS! BATTLE STATIONS! GENERAL SARNO WANTED ON THE BRIDGE. GENERAL SARNO WANTED ON THE BRIDGE. BATTLE STATIONS . . ."

He pulled on his trousers and his soiled tunic as he shoved bare feet into boots, having trouble because of their dampness. Then he was pounding for the intraship cars, buckling on his pistol belt and leaving the shower running behind him.

When he reached the bridge Blanatta was nowhere to be seen in the frenetic activity as dozens of men raced to their posts. He shot one glance at the battle-board, groaned aloud. The symbols were going crazy, forming an insane gibberish of flashing, twinkling light. He turned away.

A calm, unhurried voice was announcing, "Orbiting patrol ships report six of their number lost and their screens being forced. The troopship *Molegenaro*, north of Atlanta, has ceased reporting and the emanations from its drive piles are gone from our detectors. Another source of energy is increasingly apparent."

"Another power source?" he asked blankly, of no one in particular. "Where?"

Commander Curz appeared out of the confusion to answer. "Sir, a planetary defense base has become operational and is firing on our fleet. Its bomb screens are in place—"

"Which one?"

"PDC-10, sir—the one in Texas. *El Scorpio*, they call it."

"No!"

"I'm afraid so, sir. There is no possibility of mistake..."

"Condition-change," chanted that overriding, emotionless voice from Detectors Section. "Troopships *Kilgarea*, *Borsekk* and *Su-Nadairi* are now off-screen and not reporting. Sudden flares of energy from each ship's former position—"

"Upping ship—?" Sarno voiced that faint hope, and Curz relayed it as an inquiry to Detectors.

"No, sir—nature of explosions at least Nine-Z. Indicative of destabilization of dive-elements on near-total scale, and subsequent propulsor damage and related destruction . . ."

"Only one thing causes a de-stab of Nine-Z proportions," breathed Sarno. "Terran missiles equipped with Scrambler warheads. I—"

"Condition-change!" announced Detectors. Sarno's eyes found the board automatically, discovered the trouble spot moments later. Several lights were out. As he watched, another winked out. "Heavy cruiser *Daisdaro*," Detectors identified it. Reported being hit with a force-projector beam. *Daisdaro* is now off-screen and not reporting . . ."

"COMMUNICATIONS-SEIZURE ATTEMPT!" brayed a new voice. "Rekkish Confuser in operation—"

"That does it!" Sarno slammed a big fist down atop a radio console. "That . . . does . . . it!" He turned. "Where—?"

Blanatta was at his elbow, a bulbous microphone trailing an extension cord in hand. He surrendered it to Sarno with some relief. "The fleet awaits your orders, my general," he indicated the mike. "Fleet-wide connection . . . I had the *Sulis* tied in . . ."

Sarno thumbed the mike. Now he was, according to Blanatta, on the *Sulis-su-Banusen*— and the Voice of Empire was going to speak this day in a way that Terrans would not soon forget. He cleared his throat, began to speak, mouthing his words clearly and distinctly.

"Soldiers of Empire!"

His voice racketed back at him from an amplifier overhead and all activity on the bridge came to a momentary pause, then resumed, under the weight of necessity.

"Soldiers of Empire, this is your general. Take heed of what I am about to say!" He paused, went on. "A Terran offensive has been mounted against us—treacherously, against the promise of an utter cease-fire during negotiations. At least nine ships have already been lost in this cowardly sneak-attack. The Rekks have attacked in contempt of their word, and in utter disregard for the hostages we hold in our hands. All negotiations and attempts to deal reasonably with them have gone for naught. Therefore there is one course left for us, and one only!"

Again he paused, scanning the flickering battle-board, looking over the faces turned in his direction. He went on in sonorous tones, with the air of one who has been forced irrevocably into a predetermined but regrettable course of action. And it was true; he had indeed hoped it would not have to be this way.

"Soldiers of Empire, you hold in your hands three billions of the enemy who has so treacherously betrayed his word and attacked without warning or provocation. As they have shown themselves lacking in honor, we must uphold ours. Their sworn word has meant nothing; we must show them the folly of doubting ours.

"Soldiers of Empire, as you love your honor and that of your nation . . . Soldiers of Empire, *execute the hostages.*"

He lowered the mike, feeling all emotion drain from him. So it was done. From the first, he had known that there was that possibility, but somehow it had not seemed real—until now. The fact that he had not been bluffing would be proven beyond any doubt; the pledge of Empire would be upheld. The Terrans would, indeed, learn the folly of underrating the word of an Imperial general.

Still—he had hoped the slaughter would not be necessary . . . he'd hoped that the High Command would come to terms, and that the war could go on to its inevitable climax—with himself as hero-in-chief, of course.

Ah, well—He sucked in the tense air of the bridge and accepted the situation. There would be other campaigns—other fleets—other sleeping planets . . .

"The attack," announced Detectors, "has abated. Total number of destroyed ships: fifty."

Sarno winced. In an eye-wink of time—*fifty*.

"The *Risstaxil*— is it ready to lift?" he asked Curz. Blanatta had disappeared again.

"Yes, my general."

"Good. Make ready to do so, then, upon order. We'll fight this thing out in space and then come back for the troops."

"Yes, my general." Curz went away on the run.

Sarno thought of three million troopers scattered over three worlds—three million pairs of hands dropping whatever they were about and reaching for guns, of the few who were perhaps already carrying out his order. For a brief moment, a fierce sense of omnipotence swept him. Try to fight Martak Sarno, would they? Trifle with his ultimatum, refuse to take him at his word? Well, they'd see what such trifling got them in the long months ahead. The months and months given over to bitter hindsight, and to mass burials. For a moment he felt very close to Sirri himself in his power over those who defied him.

But it was a very short moment.

For, in the next one, a voice shouted "*COMMUNICATIONS-SEIZURE ATTEMPT!*" only to be drowned out by a giant voice, flooding the bridge with sound—a voice only too terribly familiar to Martak Sarno.

"*Llralan invaders!*" it thundered. "*Llralan invaders, hear my words!*"

"Communications-seizure succesful," announced someone unnecessarily. "Rekkish Confuser in operation; Rekkish transmitter sending—"

"Break that Confuser!" snarled Sarno. "Don't let him speak. Don't"

"Impossible, my general," came back a strained voice. "Confuser operating full strength; sending a max—"

"*Llralan invaders, hold your peace! Your ships are at my mercy; I am smashing them to bits. Your way home is blocked off, and this I promise you: for every Terran that dies, all that hear my voice now shall die ten times over—slowly and horribly. I, the grandfather of my grandson, promise you this upon my tombstone. By the name you have given me, I promise you these things. I, Gremper!*"

"Donovan!" Sarno's voice was shrill, despairing. "Donovan—shut up! Somebody get through that Confuser! I don't care how—just do it!"

"Trying, sir, but—"

"No buts! Do it! Fire Control!"

"Here, sir."

"Blast that transmitter. Pour everything we've got at it. We've got to knock it out!"

"Yes, sir, but—"

"But—*what?*"

"It is broadcasting from the defense base, sir—it's behind those bomb screens."

"Don't argue with me—*get that transmitter*. Do as I say or I'll have you shot where you stand. Understand?"

"Everything we have, yes, sir. Right away, sir." The technician looked frightened unto death.

"*Do not heed, if you wish,*" came Donovan's voice, softly. "*The choice is yours. But do not whimper for mercy when your insides are being unraveled through your ears, for you will have none of it from me. I, Gremper, will not be merciful.*"

"Gremper!" He heard that name running like wildfire down through the men on the bridge, and knew that that same voice was being heard on every other ship's bridge, and in every ship's hold, and at every gun station . . . being heard across three worlds everywhere a soldier crouched in a bomb shelter with his personal *Sulis* held to his ear. Being heard, and listened to, and feared.

"Shut up!" he roared. "Do you hear me? *Shut up!*" His gun was in his hand. "That is no ghost—that is *Donovan*, don't you understand? You silly, superstitious, sap-brained fools! *Donovan!* Not his grandfather—him! And he is not a ghost, he is alive. He can be killed—"

"*You have only one chance of mercy,*" came Donovan's somber tones.

"Shut up!" He took several stumbling steps toward the amplifier. "Shut up! *Donovan, shut up! Donovan . . .*" He went to his knees, raised his gun waveringly.

"*. . . And that chance is surrender. Lay down your guns. Come out of the bomb shelters . . .*"

The sound he made was that of a primordial beast cornered and fighting for its life. And then the seargun came to sparkling life. Energy splashed against the amplifier's steel sides, left a glowing burn from which molten drops splattered to the deck. But his aim had been bad. The voice continued.

"*Sarno and the ones responsible for the Dust must be surrendered up—*"

His gun made one long, continuous buzz on the otherwise silent bridge. Men stared in stricken wonder at their general's battle with the inanimate amplifier. A goodly portion of the Communications Section began to warp and blacken. The radiomen skittered out of the way fearfully. At last the voice died in mid-threat, died a horrible, groaning death.

There was silence.

He was in a crouch, gun up, ready for any further sounds. There were none. Slowly the tension drained out of him and he straightened, sweating profusely. "You see?" he said triumphantly. "He can be defeated . . . you *can* kill him. I killed him. *I* killed his voice, and his voice is the dangerous thing about *Donovan*. Kill his voice, kill him. Shut him up and he is helpless—*kill that voice*. Don't you see it?"

They obviously didn't.

He shunted his gaze around that circle of blank, staring faces, seeking some corroboration, some flicker of understanding. There wasn't any. He began to back away from them.

Behind him, a door opened and a voice—the voice—ordered imperatively, “*Lay down your weapons. Leave the bomb shelters. Only by doing these things may you receive clemency. Your salvation lies in your hands; act swiftly before I grow angered—*”

He whirled, gun spitting fire before he was full around, traversing the doorway savagely . . .

And stopped firing.

Blanatta stood there unsteadily, gripping the door jamb for support, a hurt look on his placid face. His tunic front was a charred shambles.

“I . . . I,” he began, and faltered. Blood bubbled over his lips and runneled down his double chins. “They said the . . . receiver was out . . . up here. I was bringing a field-radio until it could be . . . repaired.” He coughed wrackingly, and the fingers of his left hand opened. The radio clanged on the steel decking. He took two short, stumbling steps toward his idol . . . and collapsed like a grain sack, his head hitting the deck with a sickening crunch.

Sarno stood stock-still while insistent fingers pried the smoking gun from his clenched fist, his mind swirling insanely. He had *killed* Donovan, but Donovan was there, right there on the floor, hiding inside that field-radio, laughing up at him.

And talking. Always talking.

He stood mumbling under his breath and without moving out of his tracks until Security Underchief Blalir and two of his men came and placed binders on his arms and led him off the bridge and out of sight of the shaken bridge personnel.

Donovan was still talking.

### XXXIII

With Sarno’s breakdown and the death of Blanatta, the burden of command fell squarely on Naval Admiral Curz’s shoulders. The admiral was a capable officer and able fighter, but he recognized a hopeless cause when saddled with one. Forty-nine of his combat ships and twenty of his troop-luggers were destroyed; the rest were sitting ducks for the missiles and guns of *El Scorpio*. The army’s morale and discipline had been completely and utterly shattered by the unnerving use of the *Sulis-su-Banussen* to threaten and intimidate. For all he knew, not one soldier remained at his bomb-shelter post. Communications were still snarled by the Terran Confuser. He did the only thing he could do under the circumstances.

He sued for a cease-fire, got it, and asked for terms.

Not fifteen Llralan minutes after Sarno had been led off the bridge he was bargaining feverishly, with Ryan Garcia of the *South Pacific* acting as intermediary, to save something out of the shambles of the invasion. He offered all data on the Dust, its Antidote and the manufacture thereof in return for enough time to load his troops aboard their ships and blast for home. Dumas

acquiesced before the combined advisement of Garcia, Donovan and Rierson as to the value of nullifying any further use of the Dust, but insisted on having time to make sure he was getting what he paid for. Mutual safeguards were effected, and the exchange got under way.

Meanwhile the crew of the *South Pacific* was reawakened and Garcia, the other surviving members of the Delegation, the four last Unaffecteds imprisoned on the *Risstaxil*, and an additional female prisoner, a Mrs. William MacFarland, were taken aboard.

Thirty hours after Donovan had begun uttering his dire threats over the *Sulis*, Curz’s ships lifted without opposition from Terra, waited in space for the squadrons based on Venus, and then drove outward to be joined by the ships from Mars as they passed the orbit of the red planet.

Once beyond the orbit of Pluto they flashed into sub-space and were gone as utterly as if they had never been, gone home to face the wrath of a Supreme Council that brooked no failure.

And on the sleeping planets behind them, the staggering preponderance of the population remained in blissful ignorance that Terra’s solar system had been invaded, occupied for more than a month, and then abandoned.

The invasion was over. The real work had just begun.

Three billion souls, spread unevenly across the face of three worlds, had to be brought back to the land of the living. Then they had to be convinced that they had been gone in the first place, told that they had been in imminent danger of never returning from the twilight never-world of Dust-induced sleep—and then kidded into going back to business as usual, as though nothing of consequence had really happened, after all.

Meanwhile, the war had to go on. The Llralans had to be held at arm’s length while Terra and Venus and Mars got back into stride. It seemed an impossible task, but the Federation’s bent for accomplishing the impossible was what had kept the voracious Empire at bay this long.

The impossible, in the words of a proud organization four centuries dead, takes a little longer. Squads went from bomb shelter to bomb shelter with compression sprayers, awakening specifically-chosen individuals—government officials, policemen, doctors, psychologists, psychiatrists, priests, preachers, heads of widespread private organizations, influential public figures—anyone considered capable of aiding a dazed population-at-large back onto their collective feet. Then military priority took over: persons important to the maintenance of the war effort were brought awake. There were exceptions—a Mrs. Jane Donovan of London, England was one—but they were rare.

Only when a skeletal structure of society was functioning in some semblance of normalcy did Navy ships swoop low over cities and hamlets, crop-dusting the two-and-a-half billion some odd remaining sleepers back to consciousness. Reawakening was considered complete on August 10—almost exactly nine months after Sarno’s

armada had appeared on Terran screens as it came in past Pluto. Occasionally an unreached individual would be found and the Antidote squads summoned, but the occurrences became increasingly rare and finally petered out altogether. Nearly three billion people were busily trying to relate their unalterable impression that only moments had passed to the awesome reality of months spent in slumber. Rip Van Winkle could have been no more aghast than they when he awakened to find that time had passed him by. At least in his case time had continued to take its toll of everyone else. But what would he have thought—how would he have reacted—if his experience had been shared by every soul in the colonies, and had been induced by a hostile intelligence?

The brass hats foresaw the consequences of such reasoning upon the overall morale: the public would never feel safe again upon any world—would subconsciously hold their breath every time a ship rumbled overhead—would fairly panic at each raid alarm—would begin to feel that victory was far from certain and defeat more than possible, unless . . .

Unless the facts were stretched a little, and the magnitude of the Llralan accomplishment toned down until it achieved the aura of something that could have been but never was. Something harmless in itself but serving as a lesson that vigilance must be maintained. Something, in fact, passed off as almost a government-planned exercise meant to remind the public of the grim realities of the far-distant war, in the guise of a harmless, laughable, comic-opera stunt pulled by the incredibly dunderheaded Larrys.

There were speeches by all prominent figures to that effect. Speeches that those prominent figures for a change believed themselves, having no reason to suspect otherwise.

“Look, ladies and gentlemen—or boys and girls, or friends and fellow countrymen, or any of a dozen openings, depending upon the audience—fun’s fun. We had a little mid-autumn snooze at the Empire’s expense—a sort of vacation from our troubles and cares—and for that we should draft a letter of appreciation to the Llralan High Command.”

Inevitable laughter.

“. . . But the fun is over.” Grimly. “Suppose that had been radioactive waste, or exotic disease germs, or poison gas? What then, fellow patriots?” Pause. “There is a world of difference, my friends, between three *sleeping* planets and three *dead* ones.”

Thoughtful silence.

“There was no harm done this time—outside a few broken noses, cut lips and injured prides . . .”

Laughter.

“. . . But next time *it might be different*.” Menacingly. “Ladies and gentlemen—or boys and girls, or friends and countrymen, or whatever—we *must not let this happen again*. We *shall not!*”

Applause.

“We must meet the enemy on his home ground—carry the fight to his own backyard—break his back and pin his arms, so that our stars may be forever free . . . that our progeny may go forth in confidence and tread the starways opened by our forefathers and bled for by us in peace and dignity. Liberty *must not die*, extinguished by the insidious sea lapping from the banks of Empire up to the very shores of our home world. Liberty *must not*, and it *shall not!*”

Thunderous applause.

And on and on and on, until enlistments for armed services far outstripped the present requirements, and everybody was whipped up into a patriotic frenzy against the nasty aliens. The very few individuals capable of maintaining independent thought against the general hubbub of public and official indignation secretly wondered how Llrala had got away with such a trick in the first place if she was so dunderheaded; and just what good bombastic speeches, patriotic fervor and eternal vigilance would do if she ever got dunderheaded enough again to pull off another such harmless, laughable, comic-opera stunt. But they did not give voice to their thoughts—to do so would have meant being lynched, if not shot officially for treason, subversion or some other form of unforgivable naughtiness.

The thoughtful kept their peace and the Invasion was laughed away and the war went on, and after a time it was almost as if the abrupt cessation of activity on Terra and her sister planets in the early winter of '32 had never happened. Little things, like the one hundred fifty thousand people who had not awakened from the twilight never-world of Dust-induced slumber, were, adroitly swept under the rug, since they interfered with the overall picture now being painted by the powers-that-be.

Those one hundred fifty thousand casualties—for the most part comprised of aircraft pilots and passengers, mountain climbers, trapeze artists, window washers, steeplejacks, swimmers, firemen, men in the arctic extremities, flagpole sitters and the like, including the interceptor pilots from the PDC’s who had gone up to take on Sarno’s fleet, the two thousand Martian villagers murdered by Sarno as an example and all persons to whom minute-to-minute medical attention had meant the difference between life and death as well as the twenty battle-squadrons that had surrendered to forestall Sarno’s execution of six million Atlantans—were the sole losses attributable to the Invasion upon which the Empire had pinned such high hopes. As to the gains . . . the Dust was being rapidly rendered useless by the manufacture and distribution of the Antidote to all planets, and Terran Intelligence had themselves a real live Llralan mocker to play with.

Which left the nine original surviving Unaffecteds to pick up the threads of their lives where they had been ripped asunder nine months ago.

## EPILOGUE

The October sky of 2433 was every bit as clear and beautiful, and the wind as cutting, as the sky and wind of November '32.

James Rierson puffed and grunted his way to the top of a rocky outcropping and flopped tiredly. He waited until he had caught his breath, then raised binoculars and scanned the shale-strewn canyon below, following the little stream that ran down its center and then widened into a series of pools and runlets where the canyon became a wide green valley carpeted with high grass and dotted with lodgepole pines.

He took a deep lungful of the rarefied mountain air, shook his head sadly. A shame that the Antidote ships hadn't got around to spraying the Georgia wilderness areas—what made Colorado so special, anyway? Something, obviously—else why should Antidote be squandered on its game herds while the much more deserving animals of Georgia still slept under the effect of Sarno's Dust?

Sarno's Dust . . . he unslung his rifle and laid it across his lap. Had there ever really been such a thing? Here was autumn, as crisp and lovely as autumn always was—and here he was, rifle in hand and nonresident hunting license in pocket, hunting deer. He idly fingered a scratch in the gun's stock. Had there really ever been a Sarno, a Sjilla—an invading fleet? And what about Gremper and the Spook of Baxter—hadn't those been figments of a vivid imagination, of a colorful dream?

No. He was in Colorado, not Georgia, and he was hunting mule deer, not whitetail. The ten-point buck he had pursued a year ago was still sleeping at the edge of that frost-burned meadow. And would continue to sleep until the powers-that-be got around to him, or the Dust wore off, or he finally slipped away into death.

He raised the glasses again, searching for movement on the slopes around him. The big war had reached down and touched his life and had gone away again, and here he was, as if nothing had happened. *And what about those others?* he wondered. *Donovan, Nogales, Harris? What about my uncle? And that young Rayburn, and Yoganda? And Jennifer Nogales, and the daughter that was born to her at the Scorpion dispensary and Margaret Cassidy? What about them?*

Donovan . . . Donovan had tried to parlay his part in the ruin of the Invasion into a soldier's uniform, and had failed. The Military Board could be excruciatingly stubborn at times, even in the face of overwhelming evidence that they had made a wrong decision. Donovan's wife, though, hadn't seemed to think it *was* the wrong decision—she had two sons in uniform to worry about, and she much preferred having her unruly and unpredictable husband where she could look after him.

Harris had gone back to Mars and whatever he had been about before I-Day; and Margaret Cassidy had gone back to Montana and her boarding house, doubtless to run it as noisily as ever. That her nose had got her a

berth in a Lralan shipboard cell wouldn't stop her. Only death can cure a snoop.

As for Jennifer Nogales, she had dropped all charges against her errant husband in the face of his solemn word never to stray again, and they had left together for San Francisco with their baby. Rierson had his doubts as to just how long *that* would last. Wanderlust, like snooping, gets into the blood and doesn't wash out easily. But maybe he was wrong—he hoped so, remembering the wistful little girl who had left *El Scorpio* with her daughter in her arms and her husband beside her, his ribs taped where a searbeam had tickled them in that last vicious fighting in the Scorpion's control room.

Yoganda gravely thanked Donovan, Rierson, Dumas, Garcia and anyone else he could get his hands on for delivering him from the enemy and returned to Hong Kong; Richard Rayburn, Jr. enlisted to go kill some of the Larrys that had killed his father. Daniel Rierson had gone kiting off to the ends of the Federation, hunting a new sunset with a reborn enthusiasm.

Which left him.

He looked down at the rifle in his lap with a kind of wonder. It seemed impossible that it had ever been turned on anything other than game animals. That it had been the sole weapon raised in protest against the Lralan Occupation for all the long days while Donovan and the others had languished in shipboard cells and before he had run into Salesman One-Zero-Eight in that unlighted service tunnel in Atlanta—and that, thereafter, its owner had been cast in the role of a robot-commander whose jurisdiction covered three planets and at whose beck metal men called dead ones forth from their graves and sent them against the enemy—was absolutely beyond comprehension.

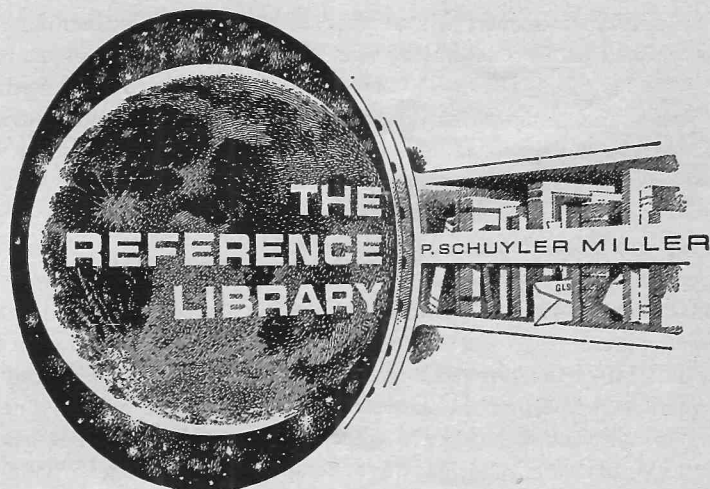
A flicker of movement down the canyon caught his eye. He brought his rifle up, and a big buck with heavy antlers went bounding down-canyon.

His rifle woke thunderous echoes along the rocky face of the gulch, and a geyser of white dust spurted out of the ground well behind the fleeing buck. Before he could work another shell home the animal was gone, disappearing around a boulder the size of a small house. The echoes died away, and the wind came whispering up-canyon to breathe coldly in his face. He cursed himself roundly as he climbed off the outcropping and slipped and slid back to the canyon floor. He wasn't here to sit in the sun and daydream—he was here to hunt deer. And the sooner he realized it and got down to business, the sooner he would be putting the tag on his buck.

He hurried down-canyon to find the buck's trail. He wasn't too familiar with this western hunting—maybe the buck hadn't run too far.

Finding the trail he went along it swiftly, head-down, concentrating.

From high above came the deep-bass rumbling of a spaceship's muted propulsors as it settled slowly toward the no-longer sleeping planet. ■



### THE LITTLE EXTRAS

Analog may harbor some readers whose main interest in science fiction is to see what happens next. I feel a real kinship to them, I sympathize with them—and I am continually exasperated by them, because they miss so much of the richness which is built into modern science fiction by its best practitioners. As has been pointed out over and over again, readers must bring something to a story, and the more they bring, the more they will find in it . . . perhaps even more than the author realized was there.

The multiple levels in good writing are supposed to be one of the things that separate modern literature from “popular trash” like the stories you read and I report on. Apart from the added richness, which I applaud, this puzzle-box construction can also serve to show the author’s ingenuity and cleverness—like one of John Dickson Carr’s locked room puzzles—and, of course, test the reader’s ability to follow through the maze.

To make my straw man as extravagantly unreal as possible, let’s say that the hero of the latest *avant garde* success makes a profound statement which bears some relation to the plot, if there is one. But the truly astute reader will immediately recognize that this statement—in the most “in” jargon of the moment—is *really* a pun-

ning paraphrase of a statement on Man and Meaning—or Meaninglessness—made in a play by a famous existentialist poet. (We will assume there are still existentialists . . . maybe somewhere in Appalachia.) This far you get in an English Literature class.

To dig deeper you have to know colloquial French. Now it depends on how you pronounce the statement which was converted into the beat pun. In Parisian French it may mean what it seems to mean. In Provencal dialect, it turns out to be another pun on a phrase in a Latin poem, written in the local vulgate by a Greek slave in Marsala. And *that* had a double meaning in the dialect of the Aegean isle where he was born—an old wives’ saying that evidently had its roots in Phoenician or Minoan. In Canadian French, on the other hand, it can be traced to a pun on a saying of the Naskapi Indians . . . and this must be the one the author intended, because it has the same meaning as the English from which we started.

I am afraid that Edgar Pangburn’s novel, “Davy” (St. Martin’s Press, New York; 1964; 308 pp.; \$4.95) isn’t going to get the chance at a Hugo that it deserves because of this multi-level structure. The book is built up from the novelettes some of you read in *Fantasy and Science Fiction*, about the teen-age boy in a future backwoods

town who stole a French horn from a mutant, had to run away when he killed a guard by accident, and grew up in the process. Enough was going on in these two stories so that the “what next” clique—not noticeably followers of *F&SF*—could be well satisfied.

Now the stories have been made part of the story of Davy’s growing to manhood in his strange society, told by him in reminiscence long afterward when he is one of a refugee fleet sailing eastward into the Atlantic to learn what has become of the world. To enjoy it fully, you have to know enough geography to realize that in Davy’s post-H-bomb world the seas have risen, and much of our New York and New England are submerged. You have to know enough history to recognize the flavor of Seventeenth and Eighteenth Century frontier society in the life of that future—and to savor the differences. You have to know enough about religion to understand how the Holy Murcan Church came to be, and how old its dogma really is.

And you really have to be like me, like Marion Zimmer Bradley, like—perhaps—Kurt Vonnegut, and Edgar Pangburn himself. You have to have been brought up in the Moha of our own time, to know and love the hills of Skoar—where even now people call their “white trash” after the hated



Royal Governor who took office in 1689. You have to feel the sameness and the strangeness of the country coming through the words.

And to get closest to Davy, and understand how he grew up, you have to know music as the author does and I do not.

Because we get only tags and bits of Davy's later years, after he had roamed with a medicine show and taken part in an intellectual revolution against the Church in Nuin, the book is vastly exasperating. One of the best characters, Dion, appears mainly in marginal notes. It would, and will, take several rereadings to appreciate all that is in it. "Davy," I think, is a slow-starter that will last and grow and be remembered.

#### ORPHANS OF THE SKY

By Robert A. Heinlein • G. P. Putnam's Sons, New York • 1964 • 187 pp. • \$3.50

Here, at last, Heinlein's "Future History" has come to its end. Two stories that appeared here in 1941, "Universe" and "Common Sense," are combined to tell the story of the last generation of the starship *Vanguard*, which set out on a sixty-year voyage to Proxima Centauri and came to grief in mutiny, forgetfulness and ignorance among the stars.

When we first see the Ship it has become a universe—the only universe its people know. In the high-gravity levels nearest the outer skin of the rotating ship, descendants of the crew still live, farm, and follow the cult that is all that is left of the true purpose of the Trip. Ray screens went down in the mutiny, so the mutation rate is high, and the "wild" levels near the null-gravity axis of the Ship are the refuge of such muties—mutineer/mutants—as are not killed at birth.

Then young Hugh Hoyland, too curious and questioning for his own good, meets Jim-Joe, the two-headed mutant gangboss, and a strange alliance is formed. Its working out, and the bringing of the Ship to a port, is the rest of the story.

Back in 1941 this was a very good story. The books Robert Heinlein

writes today are better and richer in every way, and if he were telling this story now, for the first time, it would be a different book—more like Edgar Pangburn's "Davy," of which more is said elsewhere. It's still good to have the "Future History" all in print.

#### THE SEVENTH GALAXY READER

Edited by Frederik Pohl • Doubleday & Co., Garden City, N.Y. • 1964 • 247 pp. • \$3.95

This is the best *Galaxy* grab-bag in quite a while, for reasons the editor—of book and magazine—makes clear in his introduction. I think he might have left out the Ray Bradbury story about mushrooms in the cellar, which has been reprinted twice in other books in the last few months. I guess Damon Knight's "The Big Pat Boom" is leavening, and the kind of story that might be brought on by driving past roadside souvenir stands. I never did succeed in getting with Margaret St. Clair's uncomfortable "An Old Fashioned Bird Christmas," with its ravenhaunted mavericks. The other twelve stories started me applauding, up there, a few sentences back.

My own favorite in the anthology is R.A. Lafferty's "Rainbird," a time-paradox yarn that is every bit as good as Ward Moore and Avram Davidson in its impudent and knowing juggling of anachronisms. It is exceedingly good to see Judith Merrill writing as well as she edits in "The Deep Down Dragon," a story which gets inside its characters—and its readers. Fritz Leiber's "The Beat Cluster" is a farce comedy that serves some of the purposes of Shakespeare's clowns in pointing up some aspects of our symbiotic society—his beatniks live in plastic bubbles in orbit around the Earth, and come up against bureaucracy.

"On the Gem Planet" isn't in Cordwainer Smith's best vein, but like all his stories, it keeps needling your imagination. Algis Budrys, opening with "For Love," makes a tense action story psychologically telling, and Robert Bloch twists the handle of boyhood fantasy as vigorously as he ever did an icecream freezer at the age of his

hero. Zenna Henderson, in "Something Bright," shows us the strangeness and loneliness of extraterrestrial castaways. Fredric Brown's "Earthmen Bearing Gifts" is pure Brown, two-tone and burnished with the twist at the end. Avram Davidson's "The Tail-Tied Kings" draws on legend without ever saying so, in the way he does best. Lester del Rey, another welcome returnee, gives us his gentler counterpart of Bradbury's *Martian Chronicles* in "Return Engagement."

We have two stories left. In "The King of the City" Keith Laumer has written a rough-and-tough yarn about the hero who goes up against the giant bare-handed—in this case, the crime-lord who controls post WW III New York. And Frederik Pohl is there himself with "Three Portraits and a Prayer," another giant-conquering story that is not one of his best, but is still plenty good enough.

#### THE TIME LOCKERS

By Wallace West • Avalon Books, New York • 1964 • 190 pp. • \$2.95

Avalon has another of its occasional and unpredictable winners in this likable yarn. It isn't going to earn classic status for anyone, but it's fun to read. And how long has it been since you read for fun instead of watching TV?

It seems that not so far in our future we will have made contact with the people of Tempora, a parallel Earth in a continuum where time passes, or flows, or whatever it does at a different rate than in our familiar hurly-burly. The economics of the situation are a bit obscure, but you can "deposit" time in the Temporan time-locker and redeem it later on a vacation in that post-Armageddon world of wonders. Of course, you lose weight while you're vacationing, and you have strange dreams . . .

Arnie Davis is a mentally and physically chubby account executive in the public relation firm that handles the public image of the Time Lockers for the Temporans. When it appears that Earth's gangster hierarchy, the grandsons of Cosa Nostre, are somehow rigging the lockers and infiltrating Tempora . . . when an old war-

horse of a Senator rises to the battle . . . when the unstaid wife of a very staid clergyman gets into the act . . . when a cartoon character named Willy Pan begins to issue subliminal orders to the people of Earth.

That's when "The Time Lockers" really comes to a boil.

### THE MYSTERY OF THE EXPANDING UNIVERSE

By William Bonnor • Macmillan Co., New York • 1964 • 212 pp. • \$7.50

Here is a book—a natural companion to Gamow's new "A Star Called the Sun"—which, after its first seventy-five pages or so, is a "must" for readers of *Analog*. The author, Professor of Mathematics at the University of London, can hardly be called incompetent to explain the "new" cosmologies, and he has done so as clearly and simply as is likely to be possible. In the simplification he has doubtless glossed over mathematical and physical details that the proponents of the various theories of the Universe consider essential; if so, it is up to them to correct the error from their own point of view, as Fred Hoyle, for one, is very well able to do.

The "wasted" third of the book at the beginning is old stuff to most *Analog* veterans, but it will not be for the nontechnical public for whom the book is intended. It spells out the observational facts and physical laws from which we derive the data which theories of the Universe must embody. In the final two-thirds of the book Professor Bonnor describes the principal theories, one by one, and points out their strengths and shortcomings.

For reasons he makes clear—mainly that there is no theoretical structure behind it, as there is for the various models of the Universe based on general relativity—Professor Bonnor feels that the "steady-state" Universe, in which hydrogen atoms come into existence to balance the continual expansion of the galaxies over the edge of

visibility, has been doomed by the recent work of the radio astronomers, whose instruments have shown that the farthest galaxies they "see" are two to five times as far away as had been supposed. Neither can he stomach models with mathematical "singularities"—a starting point, as in the "Big Bang" models, or an end. (Science-fiction buffs will be interested to note that one model—Gödel's, which calls for a rotating Universe—permits time travel into the past.) The "answer," the author feels, must be in some kind of pulsing or cyclic model which expands from a terrifically condensed cloud of terrifically hot hydrogen or nucleons (it must contain all the matter in the Universe) . . . goes through an evolutionary process in which stars and galaxies form, heavy elements are built up . . . then somehow recoils (bouncing off infinity?) and contracts again into a mass so compact that all matter is again crumbled into nucleons. How far we are along this course depends on the mathematics of the situation, as it does for the relativistic theories; it is unknowable for the steady-state Universe, which has no beginnings or endings, and only local events to disturb the even tenor of its uniformity.

The author not only writes simply and clearly, he has a truly British flair for understated humor, not pawky like Gamow's but nevertheless refreshing. I hope he keeps us up with the cosmological field as—like the Cosmos—it expands and/or contracts.

### STURGEON IN ORBIT

By Theodore Sturgeon • Pyramid Books, New York • No. F-974 • 1964 • 159 pp. • 40¢

Lest you doubt that there can be five old Sturgeon stories—vintage of 1951-1955—that have not been reprinted before, let me admit at the start that two of them shouldn't have been. Not that they aren't as good as some of the stuff in other collections:

they just aren't as good as Sturgeon.

The lemons are "The Heart," a limping little weirdy from a 1955 *Other Worlds*, and *Planet's* "The Incubi of Parallel X," which in the manner of that somewhat lamented magazine packs in just about everything a diligent and imaginative author could think of: ruined Earth, ET invaders, forgotten secret, parallel worlds, archaic cult, size-differentials. Wow!

You have left the Sturgeon we mostly think of today, probing and puzzling over the intricacies of human relationships. "Extrapolation"—in a 1953 *Fantastic* as "Beware the Fury" (Pyramid gives full credits to original sources, bless 'em)—has the strongest plot, illuminating a kind of human talent by showing how it betrays a seeming renegade. "The Wages of Synergy" (*Startling* in 1953, of all places!) is a scientific mystery with a sex theme that beats Philip Jose Farmer at his own game. "Make Room for Me"—*Fantastic Adventures*, 1951—explores the effect a parasitic tripartite psyche might have in its attempts to take a trio of human off-beats as its host.

As a bonus, each story is prefaced by the author's comments on the editor who bought it and the circumstances under which it was accepted. Could be that these will be sought by students longer than the stories will.

### HUMAN AND OTHER BEINGS

Edited by Allen De Graeff • Collier Books, New York • No. AS-567 • 1963 • 319 pp. • 95¢

Even at *Collier's* price you get a lot for your money in this anthology—sixteen stories in pretty fine print, all on the same theme: "Everything that diminishes human dignity is evil." It might be a better slogan for the civil rights forces than some they are using.

Here a variety of authors show the discrimination forces in action with varying success. Fredric Brown and Mack Reynolds open the book with

"Dark Interlude" and a powerful jolt in the gut, in the simply told story of the helplessly innocent man from the future that will be. Ray Bradbury's companion pieces, "Way in the Middle of the Air" and "The Other Foot" are here and seem far too literary for the company they're in.

Richard Wilson has another pair, "Love" and "Honor," of which the first is the better, if biologically dubious. It's the one about the blind girl in love with a talented Martian "spider," and the gift he brings his tormenters in the end. J. T. McIntosh, in "Made in U.S.A.," goes over it again with a very slight difference: would you marry an android? Give him credit, he gives it story value as well as message. Evelyn Smith's "The Vilbar Party" digs a good deal deeper into the reasons for chips on human and extraterrestrial shoulders. Raymond Bank's "Double Dome" describes the process by which a four-armed, double-brained synthetic genius gains acceptance: I'm afraid it's too starry-eyed.

William Tenn, in "Down Among the Dead Men," shows us the psychological hurdles of an officer who must command a squad of fighters assembled from bits and pieces, like Frankenstein's monster. As a story, it's one of the better ones. Frederik Pohl, in "My Lady Green Sleeves," shows us a warped future society in which work classifications split the classes; with the late C. M. Kornbluth, he gives us the bitter but artificial "The World of Myrion Flowers," the Negro leader who was hated to death.

In Theodore Cogswell's "The Big Stink," a Jewish druggist bucks the Anti-Martian League and finds an artificial solution to discrimination. In "All the Colors of the Rainbow," Leigh Brackett extrapolates today's brutality to the "green niggers" who visit us from another world. Robert Sheckley makes "Holdout" a comedy of discrimination, and Eric Frank Russell also twists a peel of wry humor

over "Test Piece."

But the grimmest, most realistic, and most damning of the lot is "The NRACP," by George P. Elliott, from *The Hudson Review* in 1949. In this ugly picture of a time when the United States pens up its Negroes on desert reservations, where in a series of letters one of the interning intellectuals slowly comes to grips with the terrible reality of opportunism, cynicism and politics, the author makes all the rest of the good-hearted little fables and allegories look hollow.

#### THE UNKNOWN FIVE

*Edited by D. R. Bensen • Pyramid Press, New York • 1964 • No. R-962 • 190 pp. • 50¢*

You find this here because the five fantasies and horror stories it contains were first published in *Unknown* and *Unknown Worlds*, Analog's long-deceased and much-lamented sibling. That is, all but one appeared there: Isaac Asimov's "Author! Author!" had been accepted, but the magazine died under it. No great loss, unfortunately—this routine weirdie about the detective-story writer whose hero came to life loses practically all of its punch if you weren't brought up in the era of S. S. Van Dine and Philo Vance.

My favorite and still a champion chill-starter is Theodore Sturgeon's "The Hag Seleen," about a witch of the bayous and the literalness of another witch. Most elaborate, and both nasty and philosophical, is Alfred Bester's "Hell Is Forever," in which a set of degenerate sensationalists find that it is also inside them. From Cleve Cartmill, of all people, comes "The Bargain," another yarn about another attempt to cheat the Devil. And, finally, Jane Rice contributes "The Crest of the Wave," in which a corpse will not rest.

These are not the best stories that ever appeared in *Unknown*—though "The Hag Seleen" is up there with my favorites. The cream has been

skimmed over and over before. The marvel is that Editor Bensen has been able to put together two such good collections as this and its predecessor, *The Unknown* (Pyramid R-851) from un-reprinted stories.

#### GREAT SCIENCE FICTION ADVENTURES

*Edited by Larry T. Shaw • Lancer Books, New York • 1963 • No. 72-697 • 174 pp. • 50¢*

Once upon a time, when science fiction was everywhere, there were several magazines dedicated to the proposition that as long as things happened fast and furiously, with the heroine frequently menaced by slaving BEM's and the hero omnipotent in all senses of the word, who cared about Milne relativity? *Science Fiction Adventures* was one of these, and Larry Shaw—who knows how to pick stories that move—has assembled four of its action novelettes here.

The authors? Unknowns, name of Edmond Hamilton . . . Robert Silverberg . . . John Brunner . . . Harry Harrison. All four of them have—and had in 1956-1958—dedicated themselves to the proposition that science fiction can be, and should be, fun to read. All four of them demonstrate it here.

Edmond Hamilton, of course, had been giving demonstrations for more than thirty years at the time "The Starcombers" was published. It's a very nice idea—interstellar junkmen, scavenging the ruins of dead worlds and coming up against a dying race that won't be scavenged. Bob Silverberg's "Hunt the Space Witch!" is a furious-action, weird-cult-among-the-stars story that he could just as well have blown up into an Avalon "novel." John Brunner's "The Man from the Big Dark" is the most intricate of the lot, with an ex-pirate coming out of space to help save a planet from being gutted. And Harry Harrison's "The World Otalmi Made" was well ahead of its time with its technique for mental control of a population.

## THE REFERENCE LIBRARY

These still move fast. And furiously.

### DIMENSION 4

*Edited by Groff Conklin • Pyramid Books, New York • No. F-973 • 1964 • 159 pp. • 40¢*

These four stories are dedicated to the unpretentious belief that science fiction can be just good entertainment. And three of the four originated here. Needless to say, since they are by Theodore Sturgeon, John D. MacDonald, Cleve Cartmill and E. C. Tubb, they all have an adequate supply of the "little extras" on which I've held forth elsewhere.

Sturgeon, in "Won't You Walk"—vintage of 1956—shows the making of a mouse into man, just like in the ads for Dale Carnegie—only with a difference. Not quite enough difference, after it's all over, but it's nice enough while passing through. Tubb's "Sense of Proportion," from the Scottish *Nebula*—again I eat crow for mixing this up with *Satellite!*—extrapolates a certain type of TV show ruthlessly to a cruel end. (Did I say entertainment was all these stories offered? I apologize.)

John D. MacDonald, the paperback-

mystery-original McDonald, destroyed America with his "Trojan Horse Laugh" way back in 1949, with a possible, plausible, terrible weapon that I trust no enemy power ever tries on us, or we on them.

And it's Cleve Cartmill who in 1942, right here in what was then Astounding, did give us a complicatedly uncomplicated yarn about the search for a team of maverick inventors, "Some Day We'll Find You." Since I read the book backward, this is the one I hit first and got in my head as typical of the book. On final appraisal, the little extras have it over the mere entertainment.

### A STAR CALLED THE SUN

*By George Gamow • Viking Press, New York • 1964 • 208 pp. • Ill. • \$5.75*

This book is a completely rewritten new edition of the author's twenty-four-year-old classic, "The Birth and Death of the Sun," which you'll still find on the paperback shelves. It is a companion book to the similarly rewritten "A Planet Called Earth," and I think you'll find it far better reading.

The reason isn't hard to find: in this book Dr. Gamow is dealing with the realm of physics and mathematics in which he is most at home. The flashes of insight and outrageously graphic analogies which Analog readers expect of a Gamow excursion in physics are here again, as they were not in his survey of Earth. I don't have the earlier book on hand to compare with the new one, but a great deal of the material covered has come into the body of science since the first book was written.

I would have liked to see more "birth" in the new book. Most of it is devoted to the design and operation of the nuclear engine that we know as the Sun, but how it came to exist is passed over rather quickly. I hope that there will be a third new book—a revision of "The Creation of the Universe," or "One, Two, Tree—Infinity"—that takes us out into the Galaxy and among the galaxies, and brings back the old, free-wheeling Gamow in all his glory.

Yes, Virginia, Professor Gamow does have the UNESCO Kalinga Prize. He got it in 1956. How could he help it?

## THE ANALYTICAL LIBRARY

*In response to some slightly confused requests from readers—the way we score the An Lab reports, and what they mean to authors, is as follows:*

*Readers' letters and postcards are checked as they come in, and the readers' preferences noted on a score sheet. If a reader Rates "Undercurrents Pt. II" as the best in the issue—No. 1 position—we give "Undercurrents" a 1 on the score sheet; if he votes "Stuck" next best, it*

*gets a 2. If "Mustn't Touch" is third, it gets a 3.*

*When it comes time to make up the An Lab, each story's totals are added up, and divided by the total number of voters recorded. Now if, miraculously, every voter had voted some particular story as #1, we might get a fraction like 276/276 for a point-score of 1.00. To date, in the quarter-century we've been running An Lab, you readers have never come close*

*to unanimity on any story (either best or worst!)—so we print the Position, and the Point Score for each story and author for general interest.*

*The author's interest is easily understood; we pay a 33% bonus on the #1 story—1¢ a word additional payment—and a ½¢ a word bonus on #2 position. If an author does something you like—reward him! Vote for his story; he likes it both artistically and financially!*

*continued on page 93*

## BRASS TACKS

continued from page 5

sloth), the various species of Pleistocene giant bison and the Great Auk. Only the loss of the last species named can be attributed to human efforts.

- b) That the Dire Wolf (*Canis dirus*) of California stood "six feet high at the shoulder." This is grossly oversized, by about three feet.
- c) That "the dasyurus" is in grave danger of extinction in Australia. This (loose) term includes over a dozen species. Many are currently flourishing.
- d) That Roman gladiatorial contests killed the last European lion. The Mycenaean Greeks are (historically) believed to hold this distinction, a thousand years earlier.
- e) That (early?) Man killed off *Megaceros*, the so-called "Irish Elk" (actually a giant fallow deer). There is no evidence for this at all, and the beast was probably a relict species.
- f) That the Sika deer of Asia is "extremely rare." It is, in fact, semi-domesticated and very common in some areas, notably Japan and New Zealand. (If he means a particular sub-species, let it be named).

There is much more, but it is unnecessary to go on. The real damage in the article is done by the sloppy use of nomenclature, dubious conclusions and wild sweeping statements. For instance, there is only one casual reference to the marked over-specialization of certain relict species such as the Dodo, the Passenger Pigeon, the Whooping Crane and *Rhytina*, or Steller's Sea Cow. Spelling errors abound, such as "petral" for "petrel," "blanbok" for "Blaubok," "auroch" for "aurochs" and "tarpon" (a fish, be it noted) for "tarpan," the extinct forest horse of Europe.

To sum up, Mr. Campbell, you have a background in the physical sciences. I don't believe that this shoddy parody

of scientific writing would have been published by you in a field of your professional competence.

This is the crucial point. What are Mr. Kemper's qualifications to write about mammalian and avian—he ignores the reptiles—extinction, I do not know. A sketchy familiarity with the popular literature would appear to cover it.

If the author wishes to plead that he has refrained from exercising his full technical knowledge in the interest of popular writing, he would do well to remember that accurate reporting, even in a popular magazine, as opposed to a technical journal, allows no such excuse. In any case, the article is declared to be factual.

But anyone writing for my favorite magazine had better be right. And that means he had better be checked for accuracy, because no one, even the finest of editors, can know the ins and outs of every field of scientific endeavor.

Most of the drawings accompanying the article are so awful as to be unrecognizable, but this may not be the author's fault.

STERLING E. LANIER

407 S. 22nd Street,  
Philadelphia 46, Pa.

Dear Mr. Campbell:

I quite agree with Mr. Sterling Lanier that popular writing should be as accurate as technical journalism. There is no excuse for the spelling errors, and I should have caught them. I might add the word "solitaires" in the dodo caption should be "solitaires"—as it is in the text. I should have been more specific when mentioning the Sika deer and *Dasyurus*. Some forms of these animals are doing well, as Mr. Lanier pointed out.

I could kick myself for not having had another person read the article through before packing it off to you.

The point I was trying to make concerning the large Pleistocene mammals was that the decline of these animals paralleled the ascendancy of man. I stated that we do not know the exact role man might have played in their final extinction. We do know that men killed some of these animals in-

cluding the giant bison and *Nothrotherium*.

Lions were introduced into the Roman "Games" prior to 92 B.C. This is according to Pliny, who believed that wild lions still were to be found in Europe during his lifetime. This was Pliny, The Elder, who died in 79 A.D. A number of writers mention that these first lions used in the Roman contest were European. Many of the civilized peoples of antiquity hunted lions for sport. The fact remains that man was responsible for the extinction of the lion in Europe. There are too many reports of lions in Europe after the Mycenaean Greeks to believe that these people killed the last.

The Irish elk, *Megaceros giganteus*, was related to the fallow deer, *Dama dama*, but distinct enough to be put in a separate genus. It is my understanding that this animal was not a relict, but that it had a range that extended across northern Europe and Asia.

I don't know where a dozen species for *Dasyurus* come from. I know of only five living species.

Mr. Lanier seems to feel that the conclusion drawn and ideas presented are my own, or rather that they originated with me. I only wish they had. All of them were drawn from others who know much more about extinction than I do. Some may not be popular and some may be wrong, but I wonder where we would be today if all men had believed the great master Georges Cuvier and his "evidence" for catastrophism. Science deals in facts, but I believe it should also deal in ideas. For the spelling errors there is no excuse, but I still feel that basically the facts are right and the ideas sound.

Perhaps I tried to do too much and cover too large an area in too short a space. Mr. Lanier claims I ignored the reptiles, and I did. I also ignored many other animals and all of the plants. I could have named more authorities, used scientific names and done more hedging. Whole books have been written on many of the creatures mentioned, and perhaps I was foolish to think I could say anything about them with a few words.

It is obvious that Mr. Lanier knows much of what he is talking about, but I can pick some holes in both his facts and in his English. I understand that Mr. Lanier is a professional zoologist. At the risk of disturbing him more I might say that zoology is the area of my training and an area in which I have worked for the past twelve years. I really feel that Mr. Lanier and I would agree more often than not. If he plans to be in Boulder for the A.I.B.S. meetings late this summer I would be most happy to argue more with him.

BERT KEMPERS

Boulder, Colorado

Dear John:

I have long profited by your really refreshing editorials and science-fact features. In return, here perhaps is ammunition for another. The January 24, 1964 issue of *Life* had an article on quasi-stellar radio sources and the recent Dallas conference on them. It either represented very poor reporting (by *Life's* usual excellent standards), or gross oversight by the conferees. Having no contacts with the astrophysical fraternity, or even other reports on the subject, I turn some ideas over to you for evaluation and disposal.

According to the article, they interpret the large spectral red-shift to represent a billion light-years distance and use this figure to convert apparent to absolute magnitude. They then say the computed emission is so incredibly large it calls for a body so massive that it is unstable and even "complete" gravitational collapse might take place. So they fall back in confusion. Incidentally, contrary to the report, no matter how great a gravitational field becomes—short of bending itself into a closed universe, a concept I don't believe in anyway—photons can still escape. As their energy is sapped in escaping, they don't slow down. Their mass keeps decreasing as they speed merrily along, and gravity has less and less of a hold on them.

Didn't anyone note that the red-shift could be caused by high gravity, and that, therefore, the objects could be merely super-stars near our galaxy? A

thousandth the distance means a millionth the required radiation, and the whole thing becomes much more believable.

The red-shift in question is about a fifth the speed of light or  $10^5$  times as great as Sol. A giant version of a white dwarf would seem the most logical surmise. A degenerate mass of Sol's diameter and a density of  $10^5$  times Sol's 1.41 average density would do the trick. I assume a comparable density gradient at various depths. This density is not too incredible considering that dwarfs measure  $10^4$ . Using this density, the required mass and diameter are increased by 6.3 and 4.5 times respectively. But how did such a super-giant come into being?

Galaxies are believed to have been formed by the gravitational concentration of an almost uniform original distribution of gases, mostly hydrogen. Galactic rotation shows there were eddies in the original cloud. Centrifugal force prevented complete condensation to a common center, and multitudinous stars were the result. But eddies necessarily imply non-eddy areas in which the residual rotational forces would largely cancel each other during condensation. Such a gas patch would attempt to form a one-star galaxy. Long before condensation were complete, atomic fusion would produce a nova-like energy release. Radiation pressure would slow the collapse preventing an irrevocably violent explosion. As the hydrogen fuel is depleted, radiation moderates, and more hydrogen takes its place. The center core degenerates to super-density matter as with the white dwarfs left after an ordinary star goes nova. Perhaps a nova stage was indeed a part of this early evolution. Fusion furiously continues in the hydrogen-rich layers above, and the super-dense central mass keeps increasing. There would probably be some residual centrifugal force. Viscous friction would slow the inner layers to approximate the angular rotational rate of the outer. The inner layers are thus gradually able to fall into the sun as needed. The outer layers absorb their angular momentum. The thin flare streak in the photo-

graph in the article could represent passage in fall of a regular star formed as a result of such centrifugal holdout. Slowed by gas from the main mass, it could no longer hold out as does the hydrogen which has radiation to help support it.

But why the powerful radio emission? Let's analyze what would happen with such a super-giant-mass star. The heavy elements at the surface produce their characteristic spectra. The photons lose energy in escaping the pull of gravity producing the red-shift noted. The surrounding hydrogen remains a cloud holding out against the giant pull of gravity largely by sheer radiation pressure. There are two "obvious" objections to this last statement:

(1) "Gaseous hydrogen is transparent to radiation except for a few discrete wavelengths. These are filtered out at the surface and hence the radiation pressure is negligible." Not so. All the horrific outpour of radiation is gradually increasing in wavelength as it fights uphill to escape the pull of gravity. Thus, at all levels there is a fresh supply of radiation of those precise frequencies which are absorbable. Note that each incremental layer is independently supported so there is no cumulative pressure toward the bottom.

(2) "Because both gravity and radiation follow the same inverse square law, their ratio is unchanged with distance, and the condition is unstable. The hydrogen would be either driven away or fall to the surface, depending on which of the two forces is the greater." Again not so. There are many factors involved. Centrifugal force has already been mentioned as aiding, but aiding only. The radiant flux per unit solid angle—vertex at the star's center—decreases with increasing distance from the star as gravity saps its energy. More important is the entrapment of resonant radiant energy—the only kind that counts in this matter—in close, so that its concentration is much greater closer in. It gradually works its way out, but it cannot leave directly. Instead, it is constantly being absorbed and reradiated at some

random angle. Thus, only chance allows it to diffuse out, and the concentration is greatest at the source in the center. Thus there can be a distance at which the forces of attraction and repulsion balance in stable equilibrium plus a broad self-balancing plateau accomplished by a tapering off of the hydrogen concentration. There are other considerations also. Magnetic fields affect the ionized particles and these bombard the unionized ones. The effect of the energy-wavelength distribution curve and the increased variability of angles of incidence of the primary radiation up close because of the finite size of the source are of lesser magnitude and can be safely neglected here.

Even if one were unwilling to accept these as more than aiding factors in so strong a gravitational field, there would still be a tenuous hydrogen atmosphere or plasma extending for millions of miles out from sheer thermal and magnetic effects, such as our own sun proves to us.

So what, you ask? Because it covers such an extensive gravitic gradient, the hydrogen can absorb a significant percentage of the sun's incandescent radiation. The radiating photons gradually shift to longer and longer wavelengths in their fight uphill against the pull of gravity. A photon thus stands a fair chance of becoming resonantly absorbable at some time in its traverse of the hydrogen cloud. Absorbed radiation is not necessarily re-emitted at the same wavelength. Short wavelengths can be re-emitted in long wavelength steps, thus increasing the normal ratio of long to short wavelengths manyfold. The reverse conversion has

a very low probability factor and so detract little. The violent thermal agitation greatly broadens the absorption bands (Doppler effect).

Importantly, there is a tendency for radiation absorbed at band-edge wavelengths to be reradiated at the central wavelength. The high velocity atoms that can absorb these off-peak photons may lose velocity by collision before re-emitting, and so do so at a more central wavelength. The reverse is less likely to happen, especially so because the central wavelength is greatly favored by the same emission-triggering action that makes lasers and masers work. On this large scale, the end mirrors are not necessary.

Thus, the hydrogen cloud captures photons of a large range of initial energies. The short ones are broken down into longer ones—backward sounding, isn't it—and, as they gradually diffuse outward, repeatedly being absorbed and reradiated, they do not increase in wavelength as they fight uphill against gravity. Instead, the missing energy is supplied at the expense of the thermal agitation. This, in turn, is continually renewed by the more energetic photons. Hence, large outpourings of narrow-band long wavelength hydrogen resonances.

If I am right, the radio emission should show a much smaller red-shift than the visible spectrum, perhaps proving them near-neighbors and hence much more numerous than thought in the universe as a whole.

And this brings up another question, too. Why are globular star clusters stable? There can be only one axis of rotation, so collapse should take place parallel to this axis. Do we have

random orbital planes and frequent collisions? Or are we merely fooling ourselves with the face-on view of a disk having a high central population?

A. P. YUNDT

6 Marlyn Road,  
Medfield, Massachusetts

*Sounds at least as good as some of the really way-out wild ones the astro-physicists come up with!*

Dear Editor:

Why isn't the near-coincidence of the Earth's ecliptic with the plane of Sol's rotation of the same order of significance as that of the Earth's ecliptic with Galaxy Center? (Please don't anyone say that the angle of rotation of the sun's gyroscopic mass would be changed without changing that of Earth as well.)

Which would have a greater gravitic and magnetic effect on lining up the Earth's orbit: Galaxy Center, or the nearby sun's equatorial bulge?

That part of Captain Kirton's intriguing theory partly convinces me, though, as regards the matching periodicity of terrestrial mountain-building and solar revolution around Galaxy Center. When the sun's angle of rotation moves toward or away from an even alignment or a right-angle alignment with Galactic Center, the conflict of magnetic fields and possible disturbance of the sun as well might cause enough magnetic flux in Earth's interior to generate sufficient heat to account for her crustal orogenies.

C. WINDOM WENGER, JR.

115 West Park Drive  
Charlottesville, Va. 22901

*On that further point, Captain Kirton also has theories . . .*

*continued from page 90*

PLACE	STORY	AUTHOR	POINTS
<b>JUNE 1964</b>			
1.....	Undercurrents (Conclusion) .....	James H. Schmitz .....	2.17
2.....	Snap Judgment .....	J. T. McIntosh .....	2.69
3.....	Stuck .....	John Berryman .....	2.94
4.....	Dolphin's Way .....	Gordon Dickson .....	3.48
5.....	I, Bem .....	Walt and Leigh Richmond .....	4.15
6.....	Mustn't Touch .....	Poul Anderson .....	4.42

THE EDITOR

## The Risk Takers

*continued from page 16*

possible to re-create the accident and to measure the amount and the internal distribution of the absorbed radiation. The absorption phantom is also used in tests of shielding and protective gear and in surveys of radioactive environments.

REMCAL, the calibration phantom, contains no skeleton but rather a combination of organs which can be loaded with a radioactive solution. The radiation emitted acts as a guide to the calibration of whole-body counters and specialized research instruments. Inhabitants of one of the Marshall Islands, who were victims of fallout resulting from early atomic tests in the Pacific, have been visited annually by a team of scientists aboard a Navy ship equipped with an iron-room counter and a REMCAL. One by one the islanders entered the iron room for scanning: the phantom calibrated the scans and assisted the scientists in their long-range study of fallout effects.

A section of the calibration phantom, duplicating the human abdomen from diaphragm to upper pelvis, was developed separately for organ-scanning. The phantom section contains the principal abdominal organs, in each of which a variety of hollow or solid plastic "tumors" can be located. Combinations of radiation-equivalent and radioisotope solutions produce scans of the tumors which are used principally to confirm patient diagnoses, to evaluate techniques and procedures, and to calibrate scanning equipment.

Related in application but unique in concept in a phantom for radiotherapy analog dosimetry; its nickname "Rando" eliminates a few syllables but hardly clarifies the complexity of the system.

Radiotherapy—despite the best efforts of medical physicists who plot mathematically the depth, strength, and intersections of the cancer-killing radiation beams—has been a highly theoretical method of treating malig-

nancies. If the patient recovers, the treatment must have been correct; if he dies—well, something must have gone wrong. It has been nearly impossible to check accurately the actual distribution of radiation dosages within the patient until—sometimes—too late. The purpose of Rando is to act as a patient-substitute while proposed treatment plans are checked out.

Rando is a solid, chocolate-colored plastic body of average size—minus arms and legs—containing a human skeleton and sliced horizontally from skull to thigh into inch-thick slabs. Rando monitors internal dose distribution by either of two methods, determined by the type of therapeutic voltages used: one is by the placement of X-ray film between the slabs; the other is by the insertion of tiny ion chambers into a grid of small holes drilled in each slab.

In either method, a group of slabs, representing the section of the body to be treated—is clamped together, laid on the treatment table, and given the dosage exactly as prescribed for the patient. The film is developed or the ion chambers "read." The resulting data reveal if the radiation beams will reach the tumor and help to destroy it; or if they will fall short or go beyond it, resulting in the destruction of normal, healthy tissue while the tumor is allowed to develop unchecked.

A third type of manikin developed by Alderson Research is used for medical training. Ranging from "Suffering Sam," a lugubrious dummy afflicted with compound fractures, a sucking chest wound, a badly fragmented jaw, and a lacerated scalp—to enumerate a few of his ailments—all of which spurt or ooze blood—depending on whether an artery or a vein was severed—right on through "Joe Blow," who responds to correct rescue-breathing techniques, these manikins are designed to train medical corpsmen, Civil Defense personnel, and volunteer rescue workers, and to scare the wits out of anyone who is not up on his first-aid procedures.

Based on the theory that realistic training is more effective than book-

learning, and also on the awareness that an emergency situation is no place to practice, medical training aids were developed to simulate actual injuries as closely as possible.

Simplest among the trainers are the "bleeding skins." Flesh-colored, flexible plastic, molded in the shape of a typical compound fracture or laceration and hand-painted in grisly detail, the skins are made to strap around the part of the body which the wounds represent. Hidden tubes connected with a pump and a reservoir of colored, somewhat thickened water provide a flow of blood that the demonstrator or mock victim controls. Concealed by torn clothing in a surprise setup, one can imagine their effect on an unsuspecting and uninitiated first-aid student.

"Suffering Sam" is a whole body. Sprawled on the training field in ragged, blood-soaked clothes or denuded on the examining table, Sam's chest heaves, foaming blood. His shattered jaw drips gore; the mangled stump of his left leg spurts. Jagged bone ends protrude from a broken arm, and blood pours from scalp and temple wounds. ("What would you do first?" a demonstrator once asked a visitor to his exhibition booth at a medical convention where Sam was dutifully losing all of his blood. "Call a priest!" was the rejoinder.)

"Joe Blow," existing only from the waist up and horribly cyanotic, gives the student a chance for a dry-run in mouth-to-mouth breathing before he may have to face the real thing. Other partial-body simulations are used for training in intravenous and intramuscular injection and in colostomy care.

Remember how your feelings hurt when you were a kid and somebody called you a dummy? That was before you knew about dummies that explore space . . . that ride the fastest planes and bail out at supersonic speeds . . . dummies that yield radiation data . . . that help in treating cancer patients . . . that give greater insight into the peculiarities of the human body.

Maybe it wasn't such an insult after all. ■



spread very far either, so the failure of marijuana to catch world interest is understandable?

Most of the things that did go into world distribution are readily understandable. Quinine was the answer to the whole world's problem of the malarial parasite; the world took that one eagerly and quickly. Curare and *cube* represented highly technical problems; it took a pretty well developed biochemical science to recognize them for what they were.

South American Indios were catching fish with *cube* root for centuries before biochemists caught on to what they had. The toxin in *cube*—now called rotenone—has the property of temporarily paralyzing fish and insects; the Indios would throw mashed-up *cube* root into a stream, and paralyze the fish in the stream. The fish promptly came floating to the top, where the women waded out, looked them over, chose the plump and well-developed ones for dinner, and allowed the others to recover in ten minutes or so, and continue growing for later collection. All the advantages of dynamiting a stream, with none of the disadvantages!

Maize didn't go over well; essentially, it's just another cereal grain, and not as efficient in terms of calories per acre as rice, nor in terms of calories per man-hour of labor as wheat.

But potatoes! Potatoes spread across the world in record time—a record exceeded only by that useless, no-good, worthless, foolish stuff, tobacco. Potatoes make sense, of course—they could produce more food-value per acre, on poorer soil, under worse climatic conditions, than anything else known to Man.

In other words, every one of the New World products that the whole world accepted can be understood in terms of the most excellent economic and biological good sense. Except for tobacco.

The human race—stupid, foolish, self-destructive!—displayed remark-

ably astute judgment in what it accepted from the New World and what it rejected.

Except for tobacco. And the medical profession, in the last four centuries, has been totally unable to find any beneficial value whatever in that peculiar material.

But I do not believe we can say “in four centuries of trying!” They appear to have tried very hard, for the last four centuries, to prove that it was worthless, useless, destructive, dangerous, deleterious, and an economic waste.

Without, at any time, trying to explain the absolutely unparalleled acceptance of a totally new mode of human behavior, on a world-wide scale, among even the most rigidly hide-bound ritual-taboo peoples of the planet. Among people so dirt-poor that raising tobacco meant not raising food in a culture already starving.

“It's just a habit?” *How did that habit get started?* Why didn't cocaine, enormously more habit-forming, make similar strides across the continents? Coffee and tea spread—and so did chocolate-cocoa—despite the fact that those products must be imported into most of the consuming areas of the world.

Science has been magnificently one-sided in its evaluation of tobacco; they've looked only for the evidence that would establish their predetermined conviction that the stuff is bad. They have not done any job at all, let alone an adequate job, of explaining why that absolutely incredible acceptance of tobacco took place—and why it remains solidly accepted, despite all sorts of objective reasons for discarding it.

It is bad. It *does* have undesirable dangers. It does lead to fires, explosions, accidents, marred furniture, and high cost of living. It uses land, all over the world, that starvation-level peoples need for raising food. Here in the United States we don't have to count that problem against tobacco;

we can raise more than enough food anyway. But in many places in the world, that is not true.

But—*why does the human race want tobacco?*

Medical science has, as its only answer to that question, “You shouldn't! It's just a habit and it's bad for you.”

And that, my dear doctor, is an absolute *non sequitur* in that it doesn't answer the question at all.

Medicine is convinced that nicotine is the one and only important drug material in tobacco. They consider “the properties of tobacco” to mean “the properties of nicotine.” With that postulate in place, they aren't going to look any further, to see if there's some entirely different substance which has effects they've never thought of.

It took medicine a very long time indeed to discover that the Hindu herb-doctor's use of snakeroot as a medicine as not a “mere native superstition,” and finally learn that such things as tranquilizers were possible.

I suggest that tobacco contains something that has a quite different, and yet-unnamed, action in some ways comparable to a tranquilizer, but with enormously more satisfactory concomitants.

The Indians called it “the Peace Pipe.” I think it is. The tranquilizers, while they damp down nervous tensions and jitters, also damp out ambition, sense of responsibility, and effectiveness. They've been called “don't-give-a-damn” pills.

Tobacco seems to be different; it does not reduce the sense of responsibility or ambition—but it does seem to damp out the side-issue worries and nagging nuisance thoughts, so that more effective thinking results.

How many of the world's great leaders, under maximum tension and pressure, have maintained calm, a sense of responsibility, and the driving will to achieve essential to human affairs . . . with the aid of tobacco?

“Peace be with you!” ■ THE EDITOR

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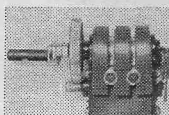
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M 51