

ZOOLOGY 2097

Trial-and-error familiarization with new life-forms is dangerously impractical on a far planet, where the representation of Earth men may be a solitary five-man crew. The loss of even a single man constitutes, in effect, obliteration of one-fifth of that planet's Earth-population. This is the "why" of the Space Zoologist.

The science of Contact came into being as a result of a government-subsidized "crash" program in the early seventies, following on the heels of the disastrous second Mars landing.

The first flight to Mars had been simple in intent. The job of the men on board had been merely to land in one piece and radio the joyous news back to Earth, to take some samplings of soil and air, some photographs and then return to Earth. All this was accomplished without incident.

It was the second Mars landing that occasioned the discovery of the quilties. These furry beasts, somewhere between marmosets and koalas in appearance save for overall bright orange and green tangles of fur, were found to be friendly, and unanimously adopted by the crew members as mascots and pets. The animals, disarmingly akin to ambulant rag-toys cut from patchwork counterpanes, did indeed deserve the nickname of "quilties". They were cuddly, friendly, with sad eyes and mournful squeaky voices that endeared them to all the men on that flight.

Fortunately, their discovery was radioed back to Earth along with the usual information in that first day's report. There were no subsequent messages.

Mars Flight Three found the remains of the crew where the quilties had left them.

On investigation by the ship's doctor, it was found that the biology of the quiltie was similar to that of a hornet, and they considered man — as they would anything warm and fleshy — in the relative position of a caterpillar. During the cuddling with the small beasts, minute hairlike spines at the base of the quilties' tails had managed to prick the flesh of the crewmen. By the following morning, the men had been eaten to death from within by the grubs of gestating baby quilties.

All of this, of course, is common knowledge today. But it is mentioned here solely to demonstrate to you the monumental hazards which an astronaut had to encounter in the days before the discovery of Contact, and the development of the Space Zoologist, without whose training, courage and efforts extra-Terran colonization would be next to impossible.

**"CONTACT — Its Application and
Indigenous Hazards"**

by Lt. Commander Lloyd Rayburn,
U. S. Naval Space Corps

A man who lived three lives? A piker! Jerry Norcriss lived hundreds — all over the Galaxy!

By JACK SHARKEY illustrated by SCHELLING

ARCTURUS TIMES THREE

LIEUTENANT Jerry Norcriss stood at the edge of the wide green clearing, sniffing contentedly of the not-unpleasant air of Arcturus Beta. Three hundred yards behind him, crewmen and officers alike labored to unload the equipment necessary for setting up camp for this, their first night on the planet.

No one had asked him to lend his strong back to the proceedings. Space Zoologists were never required to do anything which might sap, even slightly, any of their physical energies. Moreover, they were under oath not to take any orders to the contrary.

Now and then, a hot-shot pilot

would feel resentment at the zoologist's standoffish position, and take out his feelings with a remark like, "Would you pass the sugar, if you don't think it would sprain your wrist, sir?" Such incidents, if reported back to Earth, inevitably resulted in the breaking of the pilot, and his immediate removal from command. It was seldom the zoologist himself who made the report. Any crew member who overheard such statements would make the report as soon as possible, no matter what feelings of loyalty they might otherwise have for the pilot or person who had spoken.

From the moment of landing,

the lives of every man aboard a ship were in the hands of the Space Zoologist.

From Captain Daniel Peters, the pilot, down to Ollie Gibbs, the mess boy, there was nothing but respect for Jerry Norcriss, and no envy whatsoever for the job he would soon be doing. That is not to say they were on friendly terms with him, either.

It was the next thing to impossible to call a Space Zoologist "friend." Even amongst themselves, the zoologists were distracted, bemused, withdrawn from their surroundings. After their first Contact, they never were able to join in amiable camaraderie with other men. Such social contact was not forbidden them. It was merely no longer a part of their inclination. In their eyes a cool, silvery light shimmered, an inner light that marked them for the ultimate adventurers they were. No person would ever suffice them. They lived only for the job they did. Without it, few lived longer than a terrestrial year. Even with it, there was often sudden death.

Jerry was barely thirty, but his thick shock of hair was almost totally white and his mouth a firm line which never curled in a smile nor twisted in a frown. At the edge of the clearing, his bronzed flesh glowing ruddily in the failing sunset light of Arc-

urus, he stood and waited. Off in the distance behind him, Daniel Peters started across the clearing from the sunset-red gleaming of the sleek metal spaceship.

He drew abreast of the solitary figure, and said respectfully, "All in readiness, sir."

The words reached Jerry as from across a void. He turned slowly to face the other man, focusing his will with the effort it always took just to use his voice.

"Thank you, Captain," he said.

That was all he said, but as he followed Peters across the clearing toward the scorched circle where the great ship had descended on its column of fire, the pilot could not suppress a shudder. Jerry's voice was oddly disconcerting to the nervous system of the listener. It seemed like the "ghost-voice" of a medium at a seance. The mind that was Jerry Norcriss was only utilizing a body for the purpose of speaking. It did not actually belong there.

And that was true enough. Jerry and the others of his kind no longer lived in their bodies. They merely existed there, waiting painfully for the next occasion of Contact.

BESIDE the ship's ladder, hooked to an external power-outlet beneath a metal flap on one towering tailfin, was the

couch and the helmet Jerry Norcriss would use.

Jerry lay back with the ease of long habit and adjusted the helmet-strap beneath his chin, as Peters read to him mechanically. The data came from the translated resumé of the roborocket that had gathered data on Arcturus Beta for the six months prior to the landing of the spaceship.

"... three uncatalogued species," his voice droned on. "An underground life-pulse in the swamplands near the equator; the creature could not be spotted from the air . . . A basically feline creature, also near the equator, but in a desert region, metabolism unknown . . . And pulses of intelligent life, and of some unfamiliar lower animal life, on the northern seas . . . All other life-forms on the planet conform to previously discovered patterns, and can be dealt with in the prescribed manners."

A small section of Jerry Norcriss's mind found itself mildly amused, as always, by this bit of formality. The outlining of the planetary reconnaissance to a Space Zoologist was mere protocol, a holdover from the ancient custom of briefing a man who was about to undergo a mission of importance. Vainly did the zoologists try to convince authority that this briefing was futile. A

man in Contact was no longer a man. He was the creature whose mind he inhabited, save for a miniscule remnant of personal identity. His job was to Learn the creature from the inside out. As his mind, off in the alien body, Learned, the information was relayed via the Contact helmet to an electronic brain on the ship, to be later translated into code-cards for the roborockets.

Man's expansion throughout the universe was progressing faster than his mind could memorize or categorize.

The roborockets obviated his need to learn. For every known kind of alien-species problem, there was a solution. The scannerbeams of the rocket would sense each life-form over which they passed, in the rocket's six-month orbit about the planet. If all species conformed to already known types, then a signal would fly by ultrawave across the void to Earth, declaring the planet fit for immediate colonization. But if new species were encountered, the beam to Earth carried a hurried call to the Naval Space Corps, with a request for the next available zoologist.

Zoologists spent their Earth-side time at Corps Headquarters, in the Comprehension Chamber. There, with the millions of index-cards at fingertip control, they lay back upon their couches and

learned, through dreamlike vicarious playbacks, about the species Contacted by their confreres. Any Space Zoologist with even five years' service had more accumulated knowledge in his brain than any dozen ordinary zoologists. And more intimate knowledge, too. A man who has been an animal has infinitely more knowledge of that animal than a man who has merely dissected one.

SO JERRY lay there, letting his ears record the voice of the pilot but closing his conscious mind to the import of the words. It never did any good to know that the creature you were about to be was unknown. And no comment on what sort of animal it might be could be half so informative as actually *being* what it was.

Jerry repressed an urge to fidget. This was almost the worst part of Contact: The wait, while the senseless briefing took place. Soon enough he would know more of the species under observation than could be held on ten reams of briefing-sheets. Soon enough he would be sent, for an irreducible forty minutes, into the mind of each of the creatures to be learned.

The irreducible time-extent of Contact was its primary hazard. When the Contact helmet had

been developed, it had been found that approximately forty minutes — forty-point-oh-three minutes, to be exact — had to be spent in the creature's mind. No amount of redesigning, fiddling or tinkering could change that time. The Zoologist could spend neither more nor less than that amount in a creature's mind.

Since all creatures have natural enemies, Contact called for more than simply curling up and relaxing inside the alien mind. The zoologist's host-alien might have a metabolism which called for it to drink a pint of water every fifteen minutes or shrivel. In which case the zoologist would shrivel with it, his punishment for not sufficiently Learning his host.

This, then, was the reason those irreducible forty minutes were a hazard. Should the creature being Contacted die, the zoologist died with it. There was no avoiding death if it came to the inhabited creature. A good zoologist Learned fast, or perished. Which is why there is no such thing as a bad Space Zoologist. You're either a good one or a dead one.

Peters' voice came to a halt and he closed the plastic folder over the briefing-sheet.

"That's about the size of it, sir," he said. "We've focused the Contact-beams toward the indicated

areas and made a final check of all the wiring, tubes and power-sources."

Jerry sighed contentedly and shut his eyes.

"Whenever you're ready, then, Captain," he whispered, and relaxed his body in preparation for his first Contact. His mind and imagination toyed a moment with brief fancies about his forthcoming existences in swamp, desert and sea, then he pushed the thoughts away and let his mind go empty.

Faintly, he heard Peters calling an order to the technician within the spaceship —

Then silent lightning flashed across his consciousness.

II

HE OPENED his eyes. Six eyes. In two rows of three eyes each.

He did not, however, see six images. The widespread belief in the multitudinous images seen by the faceted eyes of a housefly had been debunked the first time a helmeted biochemist had intruded upon that insect's puny brain. As with human eyes, the images were fused into a whole when they reached the mind. Save for the disconcerting sensation of possessing a horizontal and vertical peripheral vision of approximately three hundred

degrees sight was comfortably normal.

Jerry looked over his surroundings and noted one slightly annoying side-effect of his hexafocal outlook. As a human will see — as when looking at the tip of a pencil pointed at the face — two images at the far end of any object looked upon, so Jerry, while able to zero in anywhere he chose, could see six ghost-images corresponding in their angle of perspective to the positions of his six eyes. Had he a pencil-tip to stare at, it would have appeared, beyond the tip, to be vaguely like a badminton bird seen head on, with images of the pencil-body comprising the "feathers."

A few moments of glancing about soon took care of the primary irritation of this unfamiliar sensation, and Jerry began to study his surroundings carefully.

He was inside a circular cavity of some sort, facing toward brightness at the opening ahead of him. The walls of the cavity were dark, sandy-smooth and slightly moist, so he reasoned he was in some sort of burrow in the soil. Beyond the opening, there was light and warmth and a hint of greenery which his host's eyes could not bring into sharp focus.

"I wish I knew my size," he thought. "Am I some small insect awaiting a victim, 'or a rabbit-souled mammal hiding from a

predator, or a lion-sized carnivore sleeping off a heavy meal?"

Attempts to turn his head for a look at his host's body availed him nothing. Jerry relaxed for a moment, and tried to sense his body by feel. He had, he knew in a moment, no neck. Head and torso were a one-piece unit, or at least inflexibly joined.

Carefully, Jerry moved his right "hand" out before his face for a look. He saw a thin, flesh-covered bony limb, with a double "elbow," terminating in a semi-circular pad which seemed suited for nothing but support. No claw, talon or digit on the pad; just a tessellated rubbery bottom, the tessellations apparently acting as treads do on a tire.

"Whatever I am," Jerry sighed, "I'm non-skid." He considered a moment, then added, "I can't be an insect, then. Insects can't rely on weight to keep them rightside up, and need gripping mechanisms. Okay, insect-size is out."

JERRY extended the pad before him and cautiously leaned his weight on it, then removed it back beneath his torso and studied the earth where it had rested. There was a concavity there, corresponding to the pad. It was not especially deep.

"Well, that lets out elephant-size," he reasoned, "and most oversize forms. I must be some-

where between a mouse and a middle-sized wolf. But *what am I?*"

Jerry tried breathing. Nothing happened; there was no sense of dilation anywhere in his body. "Odd," he thought. "Unless I get oxygen — or whatever gases this creature breathes — through my food . . . Or maybe I have air-tubes like an insect's . . . No, I'd have to shift my body now and then for air circulation, and I feel no discomfort remaining still. Besides, I have flesh, and that tube arrangement only functions well in a body with an endoskeleton. Must be dependent on food intake, then. Stores its oxygen or whatever."

He extended the tessellated pad, and rubbed it cautiously against the soil. There was a dim sensation of touch in the pad. But it was subordinate to a soma-centric sense of location. His pad "knew" where it was in relation to his body, but had no great tactile capacity for his surroundings. "Well," Jerry thought, "that lets out *feeling* my body to determine shape or function."

As it sometimes did when he was enhosted, his mind went back to old Peters, his instructor, who had taught "Project C" to the eager young zoologists. Project Contact had been mostly devoted to giving the student an open mind on metabolism and adapta-

bility to environment. A Learner had to be able to reason out — and quickly — the metabolism of his host. It was little use knowing a Terran life-ecology; man lives on combustibles and oxygen, the oxygen combining with combustibles to provide heat, and plants live on carbon dioxide and water and sunlight, renewing the atmospheric oxygen. So old Peters had always stressed the student's learning their Basic Combinations.

Basic Combinations prepared the student — or so the school board hoped — for a wide variety of chemical relationships between a host and its environment. The students had to know what to do to survive should the host, for instance, live in a chlorine atmosphere, and need large amounts of antimony in its diet for proper combustion and survival. There were a good many chemical elements in the universe; the student had to know how to deal with any combination of them in a host's metabolism.

For the most part, the instincts of the host would carry a Learner through the Contact period. A species tended to keep its physical needs not only in its mind, but in its body as well. Mr. Peters had a saying he'd been fond of emphasizing to the students: "When in doubt, black out." The

saying became a cliché to the student body, but they had the sense not to disregard it. A cliché is, after all, only a truth which has become trite because it is vitally necessary to use it often.

"When in doubt, black out," meant simply that if a situation arose which seemed impossible to handle rationally, the enhosted Learner's last resort was reliance upon the instinctive behavior of the host. The only thing to be done was to pull the mind into a tiny knot bobbing in the host's own brain, and let the host itself, once more in control, take the Learner instinctively to environmental victory. Or defeat.

THERE were dangers, of course. A Learner enhosted in a chicken, for instance, would be a fool to trust the chicken's instincts regarding, say, a snake. A chicken confronted by a snake tends to become hypnotized by its deadly adversary, and to stand stupidly in place until it is killed. In cases of that sort, the Learner would be safer taking control and going clucking off to the nearest high ground.

On the other hand, a Learner inhabiting something with the hairtrigger instincts of a bat would be much better off letting the animal's instincts take over in moments of grave risk, such as flying through the blades of a

revolving fan. A bat could get through without a second thought about those whirling metal scythes, but a man's mind could not think fast enough to avoid a grim death by all-over amputation.

"Maybe," Jerry thought hopefully, "I've got an easy one." It was possible, of course. His host might be in the midst of an afternoon siesta, and Jerry could relax and "sit out" his forty minutes of Contact. But such cases were few. At any moment a predator might come down into that orifice in the soil, and Jerry would have to fight for his host's life to preserve his own. Relaxed Learning was seldom feasible.

"I'd better see what sort of fighting equipment I have," he decided, wishing vainly that he could just turn his head and look his body over. This proceeding by feel was a slow, tortuous, and sometimes deceptive process. Hollow fangs that seemed capable of injecting venom into an enemy might — as in the case of the Venusian Sea Vampires — turn out to be an organ for drinking water, the sacs above the fangs being for digesting liquids and not for storing poisons.

Jerry stimulated what should be his tongue into action, checking for the presence of fangs. Within the mouth of the creature, which felt large in relation to its head, he sensed a rasping move-

ment, a kind of dull dry rustling, but could feel nothing with the tongue itself. "Best have a look at it," he decided suddenly, and, opening his jaws, extended the tongue.

JERRY was distinctly shocked by the thing that skewed and writhed forward from beneath his eyes. His sensation was not unlike that of a man who opens his mouth and finds a snake in it. And Jerry further realized that he was now seeing with another sextet of eyes, at the end of the tongue.

He was not one alien — he was two!

His primary six eyes took in the pink-and-gray horror extending ahead of him. The tongue was almost like another animal, serpentine in construction, and had two horny — what? — arms? — pincer-jaws? — at either side of the "head". They were tubular, like a cow's horns, and lay at either side of a wide slit-mouth in the tongue itself.

On impulse, Jerry swiveled the tip of the tongue back upon itself, and gazed through the six eyes around the tongue-slit-and-jaws/arms at the main body of his host. Then, suddenly feeling ill, he snapped the tongue back into his mouth and shut his jaws.

It had been a horrible sight. Where he'd expected to see the

abdominal region of his host, just behind the thoracic section, there lay a wet, red concavity, in the midst of gaping jaws. Jerry himself was enhosted in a "tongue" of some still larger creature within that soft earthen burrow! And some remaining fragment of his host's awareness told him that the creature of whom he was the tongue was itself the tongue of yet another creature. He was a segment of some gigantic segmented worm-creature whose origin lay who-knows-how-far beneath the earth.

Carefully, stilling a mental feeling akin to *mal de mer*, he re-protruded his tongue and looked more carefully at it. Sure enough, just behind the "head" of the thing were two stubby growths, not yet mature. In time, Jerry realized, those growths would develop into a pair of double-elbowed front "arms" with semi-tactile tessellated pads at the base, and the curving jaws/arms would drop off or be resorbed, while that "tongue" extended a "tongue" of its own.

"And then what happens to my segment?" he wondered. "Do I simply lie here forever with jaws agape?"

As he pondered this, there came a movement in the greenery just beyond the burrow orifice. A squiggly thing with an ill-assorted tangle of under-append-

ages came prancing with almost laughable ill-balance into view. Jerry, intent on observing this creature — very like a landbound jellyfish walking clumsily upon its dangling arms — relaxed his vigil as regards control of the host.

Before he realized it, his jaws were flung wide, and that self-determined tongue was leaping for its prey. The horny jaws/arms clamped into the viscous body of the passing creature, and the slit-mouth extended upper and lower lips like pseudopods to cover the writhing, squealing victim. Then a huge lump appeared in the tongue, just behind its "head." Jerry waited with a distinct lack of relish for the still squirming "meal" to make its alimentary way back into his own esophagus.

However, it did not. Just short of his lips, it halted. And after a few moments, it ceased to struggle.

Annoyed, but uncertain just why he was, Jerry attempted to re-mouth his tongue. It did not come back. His jaws lay open wide, and his tongue remained where it had shot forward to grasp the tentacled creature.

Something clicked in Jerry's mind, and he once more tried "seeing" out of the tongue's six eyes. He found that he still could, but dimly.

It took him about three seconds to figure out his peril.

THE SEGMENT behind his own would never re-swallow his segment, which had been its tongue. It couldn't. It was dead. For the time-period in which his own segment had existed as the third segment's tongue, it had some control over it. It could extend the tongue, and could see through the eyes in the tongue. But then Jerry's segment had fed, had grown, and the parent-segment had died, as had its parent-segments before it. The thing, whatever it was, grew fast, too.

That was the frightening part.

Even while he thought this, he saw that the lump was gone from his tongue. But his tongue was twice the size it had been!

Repeated efforts on his part to withdraw it back within his jaws met with failure. Again he tried looking through its eyes, and found his tongue-vision even dimmer. Then with a tremor of shock, he realized that his own vision was dimmer, too.

His host was dying. It was no longer needed to house the tongue.

Up ahead of him, the tongue-part was digging busily with those pincers, erecting for itself an extension of the burrow. Like a mole in reverse, it did not make a

mound by tunneling through the soil, but by lying atop the soil and erecting itself a circular tunnel in which to await victims.

Jerry's mind brought to him a vision of what this section of this unknown morass must look like, with miles and miles of curving tunnels, each housing a hideous worm-creature, of whom all segments were dead except the front one, which would in turn be dead as soon as its tongue had fed a bit and grown to mature size.

Shivering within his mind, Jerry wondered how much of the forty-minute period had gone by.

He had no way of estimating. His personal time-sense was overpowered by that of his host. A man within a gnat, with the life-span of a day, would feel subjectively that he had lived a lifetime within it, although only those same forty minutes would pass by until his return to his own body, helmeted upon the couch.

Each new segment might take a day to grow, or it might take a few minutes. Jerry could not tell. He could only wait until he was sent to his next Contact. There was no method of self-release from Contact. That was why survival was imperative.

A flicker of movement caught his dimming vision, and he realized that his tongue had snared yet another of the jellyfish-things.



The second lump was quickly absorbed as he watched, and he found he could no longer make contact at all with the six eyes of the tongue-tip. His own six were blurring, with a rapidity he was able to observe, and he knew that the life of the host could not last very long.

Vaguely, he was aware that the stubby growths of his tongue had now sprouted into appendages such as his own. The tongue could no longer be called that, because it was nearly a full-grown segment. Within it, he imagined, it was growing a new tongue of its own, the faster to hasten its own eventual demise.

“I’VE got to stop it,” he thought. “But how can I? It won’t withdraw, no matter how hard I try. And if it would, it’s grown too large to fit inside my jaws any more, even if I tried cramming it in with these stupid pads of mine . . .”

He stopped the pointless line of reasoning and lifted his pair of double-elbowed “arms” before his failing sextet of eyes.

“They look strong enough, but are they?”

He could feel his control slipping. His life would hang upon the success or failure of his experiment, but there was no time to try and reason out a better attempt at survival.

Swiftly, ignoring the wriggling protests of the segment before his own, he encircled it tightly with those two-jointed “arms” and held it tight and painfully taut. It was still soft, still relatively raw from its rapid growth, and was not equipped to fend off attack from the rear. Jerry, straining terribly, ignoring the searing pain that licked his consciousness, cruelly and methodically tore out what had been his tongue.

The dripping end of the thing flopped once, then lay still. And Jerry’s vision, after swimming in gray haze for a moment, coalesced once more into sharp focus and he knew his host was alive again.

“Whew!” he gasped, grateful to shut the great jaws once more. “It’ll be tough, but I know how to survive, now. My segment’s low enough on the evolutionary scale to regenerate lost parts; it will grow itself a new tongue. If I don’t get lifted to a new Contact in the meantime, I’ll simply tear that one out, too, and hang on until I get out of this damned thing!”

Then the segment ahead of him moved, and Jerry knew cold fear.

At the mouth of the burrow, one of the squiggly jellyfish-things had inserted a tentacle into the burrow and was busily ingesting the torn-out segment into a gaping hole in its underside amongst

the shiny, wiggling arms. Even as he watched, it had completed its meal, and with a shiver of gustatory pleasure, readjusted its relative dimensions until it was three times its former size.

"This," said Jerry, bitterly, "is one hell of an ecology. Each creature is the other's chief natural enemy!"

Then his fright grew as he saw that the jellyfish — he could no longer think of it as anything else — was methodically ripping down the walls of the burrow, and coming for *him*.

Frantically, Jerry tried getting at the thing with his tongue, but the raw stump within his jaws was still in the process of generating a new head-and-eyes part. A mere stub shot forward to wag futilely at the approaching enemy.

Jerry shot his tessellated pads forward, trying to push and pummel the thing away, but the few blows that landed rebounded from that shiny body like pith-balls bouncing from an electrostatic plate.

Then the jellyfish grappled with, and held onto, one of Jerry's arms, and began calmly to tuck it into its digestive cavity. If the pad had been only lightly tactile before, it became supersensitive now, as the creature's digestive juices began to erode it into its component chemicals.

Jerry felt as if he'd rammed his hand into an open wood fire. He tried to scream; nothing emerged between his jaws except that futile tongue-stump. The jellyfish, climbing in a leisurely fashion down the limb it was ingesting, flicked out a tentacle and began doing something horrible to Jerry's upper right eye. It sent waves of pain into his mind, and almost blotted out all thought, except for a maniac notion that urged Jerry to laugh at the creature's ambition. For its highly maneuverable tentacle-tip was diligently attempting to unscrew the eye.

Jerry's right arm was gone. Tentacles flipped and floundered all about his head-section. The digestive cavity of the jellyfish was widening, trying to take in Jerry's head at a single swallow. He saw, with the five usable eyes remaining, a crystalline concavity, the sides glinting with digestive fluid tinted beautiful emerald by the foliage out beyond its semi-transparent body. Then the thing closed over his head, and the last of the eyes began to sear and sting.

Jerry's mind cried out in anguish . . . and lightning flashed across his consciousness. White, silent lightning.

Pain ceased.

The time of Contact had passed.

III

CAPTAIN Daniel Peters paced agitatedly back and forth before the couch holding that still figure in its bulky helmet. The last glow of the sunset had vanished behind the trees around the clearing minutes before. Peters took three puffs from a just-ignited cigarette, then crushed the white cylinder under his heel.

"Sir?" said a man at the airlock of the ship.

Peters looked up swiftly, and identified the speaker as the technician for the Contact mechanism.

"How's it going?" he asked, trying to keep his voice matter-of-fact.

"First report's just come in," said the man, with a brief smile. "Information's being coded onto a new card for the robo-rocket index. I guess Norcriss came through the Contact all right. His life-pulse still shows on the panel. It was flickering badly for a few minutes, though. Think I should terminate?"

Peters hesitated, then shook his head. "No, I guess not. They tell me there are no after-effects to even a hazardous Contact. Norcriss'll be wanting to get on with it . . . poor devil," he added, with a wry smile that touched only

his lips, didn't reach his eyes. "Proceed, seaman."

The other man nodded, and vanished within the ship . . .

IV

VAST flat fields of sun-bronzed stone stretched in all direction to the horizon, pockmarked with rimless craters, seething with red liquid which flickered with dusty blue fingers of fire here and there on its surface. Every so often a pale plume of steamy white rose toward the coppery overturned bowl that was the sky.

Cautiously Jerry sniffed the air. Sulphur. That was the red liquid burning in those many pits: Yellow sulphur melted into gluey scarlet pools amid the nearly invisible shimmer of its consuming fires.

"Sulphur doesn't steam," Jerry thought idly, still sniffing at the fumes. "So the white plumes mean there is water, or some volatile liquid, mingled with the deposits in those pits."

After a moment, he realized that he was no longer taking random sniffs of the fumes, but was actually indulging himself in a regular orgy of breathing. The smell of the sulphur was as strong and piercing as he'd ever known it, but absent was the almost simultaneous effect of raw throat,

streaming eyes, and hacking cough.

"The desert air must be nearly all sulphur gases," he realized. That would explain the hue of the sky, and the not-unpleasant silvery haziness of the atmosphere.

"And I, if I don't keel over in a few more moments, must be a sulphur-breathing creature."

Sunlight, from nearly directly overhead, was warm and comfortable upon his head, back and hindquarters. An unusually flexible feeling in the caudal region of his spine told him that he had a tail, even before he swung his huge head about for a glance at it. The body, as bronzed as the rock on which it stood, was something like a lion's, although the taloned feet, from heel to the first leg-joint, were horny and rough in appearance. They were not unlike those of a barnyard fowl, if considerably thicker and decidedly more lethal.

That, save for a hard-to-see fringe of darker fur that ran up his neck toward where he felt his ears to be, was all of his body that he could view.

"I wonder," he mused, "what my head looks like?"

A brief turning of the problem in his mind gave him the solution to it. It wasn't the best possible way of getting an idea of his latest cranial conformations, but — un-

less there was a looking-glass lying about — it was the only way at hand.

Jerry tilted his head until his eyes fell upon his shadow on the brown rock beneath him. By tilting it from one side to the other, and joining the various silhouettes in his mind by a simple application of basic *gestalt*, he knew what his head looked like.

Very like a lion's, except that it seemed to have no external ear. A single slender silhouette that fell from the forehead region, stiletto-pointed, must be a sort of horn, unless it deciduated periodically, like a deer's antlers.

FURTHER speculation on his appearance was interrupted by the appearance of another creature, trotting like a terrier between the fuming sulphur-pits, coming his way.

It could be a twin to what he now knew he looked like, but it seemed just a bit smaller, somehow. And it was carrying something carefully in its teeth.

"Should I run, fight or just ignore it?" Jerry wondered. "It doesn't seem menacing. But neither does a pekinese till you try to pet it."

He allowed his mind to retreat a fractional bit from control of his host, and watched its reactions to the newcomer. Jerry felt a surge of emotion, a sort

of fond, proud, doting feeling, and knew that this approaching creature was his cub. "That's a help," he thought, relieved, and resumed control of the animal.

The cub halted a short distance away, and gently set its burden upon the rock, placing a fore-footful of talons upon the thing before letting go with its jaws. Under the talons, the thing moved. Jerry saw that it was a sort of squirrel, except that it had well-developed forepaws, the pads of which hinted that it undoubtedly ran quadrupedally instead of climbing trees. Then the memory of the sort of terrain he was in re-crossed his mind, and Jerry felt foolish.

Naturally it didn't climb trees in a region that was devoid of any vegetation whatsoever.

Jerry noticed that the cub seemed to be waiting for something. He wished he could speak. He had the goofy feeling that he was supposed to say, like a man confronted by a bottle of Chateau Neuf in the hopeful hands of a wine steward, "That'll do nicely, thank you."

A nod was almost universally a sign of acquiescence, so he tried that instead. The cub seemed pleased, and immediately, by lowering that forehead-horn between a pair of the talons enfolding the struggling land-squirrel, snuffed out its life with a

thrust through its neck. Then it removed the talons from its prey, and took a backward step.

Apparently, as the sire, Jerry was to get first bite.

"Now don't go all picayune," he cautioned his digestive tract. "Come on, Jerry boy. You eat oysters while they're alive. You should be able to eat a squirrel when it's dead. Besides, if you like the smell of this lion-creature's atmosphere, you'll probably like the taste of its food. Eat hearty."

With that, Jerry lowered his head and let his sharp teeth snap off a haunch of the squirrel-thing. He went to chew it, then realized that — unlike his prior Contact's over-equipage — he had no tongue. This was strictly a bolt-your-food host. So he tossed his head back, and managed, with a spasmodic effort of his thick muscular throat, to get the morsel into his stomach.

The cub stepped forward then, bit off a chunk for itself and got it down with less apparent effort.

"Well, he's had more practice at tongueless eating," Jerry consoled himself. Then, noting that the cub was standing patiently awaiting something, he swayed his head from side to side, trying to convey, "No thanks, it's all yours, kid."

But the cub, its head tipped perplexedly to one side, was still

watching him, waiting for something, a sort of puzzled anxiety in its gaze. Jerry reasoned that if he simply backed off, the cub would take that as a gesture of refusal to eat any more, so he took a few steps away from the squirrel-thing.

AND the cub, an almost human look of bafflement on its face, gurgled a whine from its throat. It began to bounce about on its legs like a housebroken dog that very urgently wants out.

Jerry thought hard. The frantic desire of the cub for him to do something was more than mere pettishness on its part. There was real panic in its eyes, now. Jerry felt the first thrill of danger. What was he doing wrong? Or what wasn't he doing right?

Mere after-you-Pop protocol could not explain the glint of fright in his cub's eyes. Or could it?

Jerry tried to remain calm and think reasonably. The sire-and-cub relationship was throwing him. Most animals — in the narrow group that remained linked by relationship and affection even after the cubs matured — ran along opposite lines. The parent went out and got food for the kids, and not vice-versa. On this planet, apparently, having a cub was the

nearest thing to Social Security.

"Remember, you idiot," Jerry snapped at himself, "this is a species. It is no beast rational mind you are dealing with, but an animal mind. That means that the cub's apparent protocol is instinctive, and not a matter of etiquette. And an instinct has a reason behind it, doesn't it? Only man can skip over protocol. You have to do something before the cub feels that it can do it — and whatever it is you're not doing, it's driving the cub to distraction. You'd better go for a second helping of squirrel, and fast, or you're going to have your kid in a mental institution!"

Not exactly relishing completing the meal, Jerry stepped back to the furry little corpse on the rock, and only as he came near enough to bite into it was he suddenly aware of another odor mingling with that of the sulphur fumes. Unbelieving, he stared at the spreading pool of putrescence that ringed the remains of his cub's prey. He stared, silent and amazed, as flesh and bone crumbled and dissolved there on the ground, until there was nothing there but the noisome liquid and a few tiny teeth.

"Incredible!" thought Jerry. "To decompose so damned fast! But it certainly explains why

Junior brought me that thing still alive and kicking. It didn't last more than a few minutes after it died — *Ugh!*"

The sickly retch boiled out from his stomach with a painful expansion, and he scented the same foul odor on his breath as arose from the liquid that now lay drying in the burning sunlight.

"The damn thing's going rotten inside me!" he said to himself, feeling the first wave of illness shake him from horn to tail-tip.

His flesh, beneath its bronze-colored fur, felt suddenly cold and greasy. Jerry knew that feeling well, from one summer when he'd eaten a sandwich with mayonnaise that had lain too long outside the refrigerator. It was the onset of ptomaine. He and the cub could be dead, in a very ugly manner, within less time than he had to await his next Contact. Or was it less time? It was subjective, wasn't it? Maybe this period would be over more quickly than the last one. Or maybe more slowly . . .

JERRY turned to look at the cub. Its eyes were glazing. It was breathing in gasps through its open mouth, staggering as it tried to remain on its feet.

"We're poisoned," Jerry groaned. "And it's not on purpose.

That cub didn't trot here with that squirrel just to knock off its old man! There's something else has to be done, something I've overlooked. And my stupidity is killing us."

Weakly, almost automatically, Jerry's conscious mind did the only thing possible under the circumstances. Cliche of old Peters or not, "When in doubt, black out" was the only solution. Jerry swiftly relinquished his grip on the controls, and let the lion-thing take over its own destiny.

The first thing it did was rush toward the scarlet surface of the boiling sulphur pit near the cub. The muscles relaxed and showed no sign of relaxing in that flame-bound gallop, and Jerry grabbed at its mind and got back in control just as its forefeet stood on the brink of that blue-flaming red pool.

"Oh, damn!" he groaned, agonized by both his fear of fire and the growing discomfort within his stomach. "Of all the creatures in the universe, I have to hit one with the lemming-instinct. This damn thing's bent on boiling itself alive if I let go. And if I stay in control, I die of ptomaine!"

Jerry Norcriss wasted nearly thirty seconds feeling sorry for himself. And then he remembered something about lem-

mings. And also something about cubs.

Lemmings, those strange little rodents that take it periodically in their heads to all go rushing into the ocean and drown, are not suicide-bent. Their ancestry is older than the continent on which they live. At one time the spot wherein they plunge into the ocean was linked with the next continent over. The migration — for that's what it is with lemmings — had at one time been perfectly safe. So safe that the migration of the lemmings became instinctive. And, after the continents separated, or the band of land joining them sank beneath the sea, the lemmings blithely continued their trek, and perished. Lemmings might die, but the ages-old instinct of the specie wouldn't.

No animal, Jerry realized, is deliberately self-destructive. No animal but man — who is more than animal, and can decide upon his own destiny despite what his instincts back for.

And cubs, Jerry recalled with chagrin, are not always born knowing survival-tactics. Some cubs have to be taught how to survive. And this one is still in the process of learning, and only senses that — since it is becoming deathly ill — something is horribly wrong. It wants its sire to show it survival, and its sire

is in the hands of a nincompoop like me . . .

FORTUNATELY for Jerry and the cub, his thoughts on cubs and lemmings lasted only a fractional second, so all-inclusive is the mind's apprehension of a situation.

And then Jerry, feeling greatly relieved, let go of the controls once more and let the lion-thing bend and drink from the blazing sulphur-pool at its feet.

Of what the host was constructed, Jerry had no idea. Its cell-structure might be high in silicates, or possibly be akin to asbestos. Whatever it was, the blazing red sulphur went down its gullet like sweet warm wine, and the decaying squirrel-thing was transformed into chemicals that were comfortably digestible.

Jerry was glad to see that the cub, standing on shaky legs, was drinking, too. It seemed likely to survive its brush with death.

Not a bad life, he thought. Catch a meal, take a swig of wine and then just loaf around in the sun. Nice planet . . . if you like sulphur, and have a bright-eyed young kid who won't make a move without your approval and example—

Jerry's ruminations were cut short by a sound of leathery wings, high in the coppery sky. Abruptly alert, he lifted his

shaggy head and saw an ominous formation of Vs in the sky. They grew in size, and became the forms of gigantic airborne things, a cross between the ancient Ter-ran pterodactyl and a sort of saber-toothed ape.

Something told him these approaching things were not friendly.

He turned his head to the cub, but this, apparently, was a lesson already learned, because all he saw of his scion was a disappearing blur of buttocks and tail as the cub scurried in a clumsy gallop across the plains of sunburnt rock. In another instant, Jerry was scurrying right after him, for reasons above and beyond Togetherness.

The paws wouldn't manage right, so he finally dropped back a bit and let the lion-thing's brain take over the job of escape, his own mind merely going along for the ride.

"But where can we *hide*?" he wondered, fascinated despite his fear. "Can we pull the hollow reed routine under the surface of a sulphur-pit? Or are there caves someplace in the vicinity? Or do we just run until either our legs or those simianipters' wings give out?"

Then his mind got entangled with the purely empirical cogitation about the valkidity of coining a word like *simianipters*

(which seemed to mean "ape-winged" when the coinage he desired was "winged-apes") and his mind was bouncing so busily between this knotty problem and the chances of escape from those creatures and the puzzle of just what constituted safety from the flying things that he barely noticed the white flash of silent lightning that heralded cessation of Contact.

V

"CONTACT completed," said the technician to Peters, in the purple twilight slowly deepening to black starry night. "Slight dimming of Norcriss's life-pulse this time, not so bad as last time."

Peters nodded as he ripped open a fresh packet of cigarettes. "Machine functioning properly?"

"Yes, sir," the technician nodded. "Norcriss could go on at least three more Contacts with the power we have left. Shall I activate him again, sir?"

"Go ahead," murmured Peters, his eyes fastened on the pallid face of the young man on the couch . . .

VI

NOISE. Footsteps on metal. Metal meant refined ores, and that in turn meant intel-

ligence. Yet he couldn't inhabit an intelligent mind!

Jerry opened his eyes and took in the scene before him. His vista was oddly diverted into vertical panels, and then, as his mind settled into full control, he knew that the panels were spaces between bars.

The thought crossed his mind that bars must be vertical everywhere in the universe. Horizontal ones would hold a prisoner as well, but the origin of bars lay in primitive stockades, stakes plunged into the ground about a prisoner. Primordial tribal habits were not easily broken, even after attainment of civilization.

Through the bars he saw — well — men. They were at least bipedal, and walked upright, and had two upper limbs with facile digits at the ends, all in keeping with the nearly universal rule of bilateral identity.

Beyond that, the resemblance to man ceased.

The creatures he saw were clothed in satiny uniforms, yet something about the material told him it would hold up under heavy stress. Wherever their actual bodies showed — head and hands, mostly, though a man of apparently lesser rank was bared to the waist, working on a machine set against one wall — they were covered with

short (or cropped) white down. Jerry could detect on the heads no sign of ears or nose, but in the midst of the furry expanse of face, tiny green-glinting beads of jet were eyes, and a thin, wide blue-gray slit further down was the mouth.

The hands, he noted with interest, were furred even within the palms. Or so he thought until one of the creatures, idly flexing a hand, showed Jerry that the fingers bent on double joints in either direction. There were no nails as such, but each digit on those deceptively soft-looking hands terminated in a tapering cone of some hard black material, as shiny as the eyes in those coconut-frosted faces.

Jerry once more had cause to regret the impossibility of Contact within a mind of an intelligent creature. Intelligence equated with impenetrability, so far as Contact went. You could learn of an intelligent race only so much as their words and gestures and behavior cared to let you know.

Jerry knew he was in a sea-region, but whether over it, on it, or under it — No. The room, so far as he could see, was windowless. It could mean that the vehicle was carrying its own atmosphere, in order to keep the riders alive, whether the outside surface of the ship were within

inimical gases or liquids, or the deadly nothingness between planets.

Then again, he might simply be within a fortress, or below sea-level in a ship. Jerry gave it up, and concentrated on himself, and his barred container.

THE CAGE was as high as one-fourth the height of any of the men before it, so Jerry reckoned his own size as about one-sixth. If they were all six-footers, then he must be about rabbit-sized. He glanced down his body and saw hard gray scales over a curving belly, with a pair of hind feet that seemed to be all phalanges and no metatarsals. From "heel" to foot-tip, Jerry had three long, hard-looking black spikes. "Something like a swan's foot with the webbing removed," he mused.

A look at his forepaws before his face showed him three similar phalanges, though only two-thirds the length of the hind ones, and having in addition a sort of stubby rudimentary thumb. His forearms were scaly, too, and possessed a wicked spur of the same black material jutting downward from the elbow.

Happily, three sides of his cage were polished metal walls, so he was able to get an inkling of his facial characteristics in the

warped uncertain mirror of the surfaces. He saw startled-looking eyes, round as quarters, with red irises that dilated greatly with each tilt of his head toward the shadowy rear of the cage, and narrowed the orifice about the pupil to a pinprick when he turned near the front. He seemed to be noseless, also. When he tried to sniff, nothing happened. The attempt made his head feel stuffed up, but he knew that the feeling was only inside his mind, and not an actual sensation.

Jerry looked at his mouth. It was just a wide slit in his round, earless head — no, not earless; there were auricular holes under a flange of gray scale — just a wide slit with a glint of sharp-pointed bright orange teeth.

"Well," he thought, "I'm at least a carnivore, possibly an omnivore, with teeth like that. The light in this room is apparently not intolerable to those fur-faces out there. So — if the slight shooting pains in my head plus the shutting of the irises when I face into the room are any criteria — I must be a nocturnal beast of some kind. Eyes like this would be blinded by sunlight."

He decided he was, in the ecology of the fur-faces, something along the lines of a raccoon, even if his flesh were

scaly as a pangolin's. "Maybe I'm a pet," he hoped. "But there's something about the atmosphere of this room —"

Something rustled and clacked against the wall of his cage.

Jerry withdrew his control a fraction to let the host's mind tell him what it might be. The mind of his host was atingle with antagonism. Yet, as Jerry heard a similar movement somewhere off to the far side, the mind of his host grew suddenly tender and excited.

Jerry re-assumed control, having the information he needed. His cage was one of at least three, possibly many more, housing animals like the one enhosting him. The nearby cage contained an animal of his own sex, the other contained an animal of the opposite sex, possibly a mate. Whether male or female, Jerry had no idea. He had in any Contact — barring a procreative arrangement beyond the simple bisexual — a fifty-fifty chance of being male. The worm had been self-generating, the unicornate lion-thing had been male. What Jerry's present sex was, he had no idea. Even on Earth, scaly creatures tended to baffle all but the experts as to sex. Jerry inspected the mind of his host for a few moments, but could find out only that it yearned for that other one in

the other cage. The intensity of the yearning gave no clue if the urge were man-for-woman, woman-for-man, mother-for-child, child-for-parent or — it was barely possible — friend for friend.

Jerry decided to ignore the yearning by taking full control of the host once more. He took stock of his circumstances. Here he was, a nocturnal carnivore, caged with many of his own kind in a vehicle moving through space or water.

He was not just there for the ride, that was certain.

Being delivered somewhere? No, the room beyond the bars looked little like a storage hold. Of course, these fur-faces might have alien ideas about the way a storage hold should look. Still, they seemed to be bosses of some kind. There was no mistaking the dressy look of their uniforms. A high-ranking officer might go into a storage hold, but it would be for an inspection only, and these creatures were busily doing something in the center of the room.

THREE were three of them, discounting the bare-to-the-waist man working on that odd-looking machine. They stood by some waist-high object — two with their backs to Jerry, one in profile — very intently ab-

sorbed in something on that surface.

Jerry twisted his head about, but could make out no relevant details on that surface. "They could be studying a map laid out on a table," he pondered, curiously. "Or maybe they are shooting dice at a crap table, or—"

Further conjecture was suddenly, and horribly, obviated.

The man at the wall straightened up from his labors and announced something, unintelligible to Jerry (the voice was an unbroken hum that rose and fell in pitch, unarticulated into consonants or vowels), which undoubtedly meant, "She's all fixed." The fur-face in profile turned with quick attention and stepped to the machine. He pulled from its slot a thing like the cable-supported arm of a small crane terminating in a cone-shaped flexible surface, and arranged it over the thing on the table which his movement to the machine had exposed to Jerry's gaze.

The thing on the table was the face of another of the white-furred men, and Jerry suddenly knew that this was an operating room. These men were doctors, involved in surgery.

The machine, so hastily repaired, was some sort of anesthetizing gadget. They'd had to

wait for it before proceeding. All this information Jerry worked out with only a small part of his mind; the majority of his concentration was focused upon the other thing he'd seen upon the table, strapped wide-eyed into position beside the patient.

It had scales, sharp orange teeth, and might have been a rabbit-sized cross between a raccoon and a pangolin, and the wide eyes were tightly irised into discs of coppery red, with no visible pupils, under the light that overhung the operating table.

"What the hell is going on here?" Jerry thought, with dismay. "Surgery? In the same room with cages full of animals? What about sanitation? What about infection? The doctors are maskless. The room is only passably clean — certainly not scoured with green soap, alcohol or live steam. And that repairman is standing beside the table scratching his stomach!"

Bewildered, yet drawn to watch with morbid fascination, Jerry ignored the pain that stinging into the room brought to his eyes, and gave full attention to the proceedings.

THEY were — from a raccoon/pangolin's viewpoint — pretty ghastly. The men, muttering to each other as medics the uni-

verse over must while engaged in surgery, started snipping and plucking and sawing and clamping with lackadaisical facility upon the two bodies strapped to the table. One medic concentrated upon the man, the other upon the animal, while the anesthetist merely held the cone lightly upon the patient's face, and glanced now and then at dials upon the machine proper, as if for reassurance, or possibly to show that they were efficient and well-trained.

They did not trouble to anesthetize the animal.

As they shifted about in their work, Jerry got a better look at the patient. All along his chest and belly, the white fur was gone. From the edges of the empty region, Jerry could see that the fur had been scorched away. The surviving fur in the periphery was stunted and slightly carbonized. The "flesh" beneath that exposed region was smooth, excepting a few blistered spots near the center. It resembled thin, flexible green plastic, of the sort that seems to be translucent, but is actually transparent, the darkness of the color tending to make it seem opaque unless light could be placed directly behind it. Into this surface went the scalpels and clamps and pins of the medics, until they had a triangular flap

lying back to expose the organs within.

Jerry, well-versed in all the metabolisms available to the scientists of Earth, was completely baffled by this one. None of the internal organs was fastened to anything.

The abdominal hollow of the creature was filled with a clear lemon-colored liquid. The organs just floated within the liquid. They were, Jerry noticed with amazement, not even juxtaposed with any sort of permanence. Even as the medic reached for them, they bobbed and moved about each other in the yellow fluid, as impermanent of locale as apples in a rainbarrel.

Then Jerry had it.

"They're colloidal!" he gasped within his mind. "A tough, flexible outer shell! The whole thing hollow from cranium to fingertip to toe, containing a liquid that acts as reagent, catalyst, suspensor and electrolyte for the mineral crystals, cell globules and chemical coagulates. These fur-faced creatures are nothing more than ambulant, intelligent hunks of protein! The whole setup's there. The lemon-colored fluid is the dispersion medium, and those 'organs' they're lifting out are the disperse-phase. But . . . what do they need the raccoon/pangolin for?"



His fellow-creature, hissing in agony, was already a glittering, almost formless thing under the grisly tools of the medic standing over it.

It was, Jerry realized, being laid belly-open with no more regard than is given a lobster's tail-muscle by the gourmet with his tiny three-pronged fork.

Jerry could only watch and wonder and wait to see the use to which the animal would be put. He had not long to wait.

ONCE laid open, the animal's internal fluid, a pale gray solution, was sucked out into a bulb-headed tube, much as a housewife gets the turkey-drippings from under the bird for basting. The fluid was dribbled into a row of transparent jars with calibrated sides, some getting more, some getting less. Then a drop of liquid — a brown liquid for this one, a red for that one, and so on — was added to each. While Jerry gazed at the scene, fighting the headache that began to grow with the brightness of the lights over the operating table, the medic captured each jar and gave it a sharp, practiced shake.

And then the whole picture was clear to Jerry.

"Crystal-clear," he said, with bitter humor.

For that was the answer. The

fur-faces were colloidal, the raccoon/pangolins were crystalloid. Whatever fluid lay within the bellies of the animals, it was a super-saturate, needing but the right chemical additive before coming out of its liquid state to form the right crystals.

In each jar, almost instantly after shaking, bright crystals had begun to form within the liquid. Within but a few moments, the jars were being uncapped and the medics, with neat little tongs, were lifting the crystals from the solutions and placing them within the abdominal cavity of their anesthetized patient. The flap was fastened down into place with a gadget that seemed to work on the principle of a soldering iron. As it slid along the angled edges of the incision the sides met and fused, leaving only a tiny ridge to attest to the fact of the operation.

One of the medics nodded to the bare-to-the-waist creature still standing by. The man shoved over a wheeled cart, slipped the patient onto it and wheeled him out of the room through an archway barely within Jerry's field of vision.

Jerry's main concern, however, was for the fate of the crystalloid creature, lying so still upon the table. One of the medics undid the straps across the body, lifted it by a hind leg and shoved it

through a hinged metal flap against the wall, then stabbed a button . . .

A red flare went off beyond the still oscillating metal flap, and Jerry had all the information he needed. A nice little incinerator, for hollowed-out corpses.

"I wonder," Jerry thought dismally, "how long my forty minutes will take in *this* Contact!" His headache was growing worse, and it wasn't just from the lights.

At that moment, a sudden lurch sent him crashing against the wall of the cage. A clamor of alarm bells began throughout the vessel.

One of the medics yelled something, and threw a switch against the wall opposite that housing the anesthetizing machine. A panel slid away, revealing a large mosaic of close-packed little spheroids. As the medic twisted a dial at the base of this arrangement, some of the spheroids began to flicker whitely, while others remained dark.

Then Jerry recognized it for what it was. A form of television screen, composed of individual lights instead of phosphorescing dots activated by magnetically guided electrons from a cathode. The effect was the same.

A picture, sharply etched by the alternation and varying intensities of the bulbs, appeared on the mosaic-screen. Across the dream-like surging of the black-gray-and-white heavy seas in the foreground, Jerry made out an armada of strange-looking vessels coming across the ocean toward wherever the pickup camera lay. Unlike Earth-vessels, they tapered *inward* as the sides of the vessels rose from the waters, then were abruptly truncated near what would have been a peak by a railed-off area that was the deck.

"Unless I'm much mistaken," thought Jerry, grimly, "I am on a ship which — be it alone or one of many in a convoy — is about to be attacked by those vessels out there."

A SECOND later he knew he was right.

From the approaching fleet there had come no sign of armament, no flash or flame or belch of smoke or blaze of ray, but the room he was in jolted violently, then canted crazily for a sick moment before righting itself. The alarm bells grew louder in their metallic clangor.

Footsteps pounded down the corridor. The bare-to-the-waist man or another like him — Jerry could not distinguish between the creatures — came into the

room shouting something. The surgeons shouted back and then the man raced out again.

Another jolt made the room tremble, but this time it felt different, as though the room were built to take that sort of stress. Jerry recognized that his ship was in the process of firing back, with whatever strange weapons these fur-faces employed. Even as he reasoned this out, one of the enemy vessels on the screen shuddered, split into almost-matching halves and plunged beneath the waves amid much flame and confusion.

The medics were not watching. One of them had moved out of Jerry's view and now stepped back into it, carrying the wriggling form of one of the animals from the cages. As Jerry watched, the animal, its orange teeth snapping vainly at those hard black fingertips on the medic's white-furred hands, was lashed to the table in the gray-smeared spot where its predecessor had perished. Then the bare-chested man was coming back into the room, wheeling a man on a cart. This one was missing fur from an arm and part of the chest area. Jerry was able to confirm his earlier theory that the hollowness of the creatures was extended throughout the flexible green body-sheaths.

"Sonics," thought Jerry, all at

once. "They're using sonic rays on each other. A good dose of heavy infravibration could ruin a colloidal creature! The loss of the fur through subsonic friction is only a side-effect. The main damage is the breakdown of those colloid organs when the beam focuses on a man."

That would explain the way the other ship had simply sun-dered. Artificially induced metal-fatigue, by the application of controlled vibration.

"Damn," thought Jerry, "this is dangerous"

Other alien vessels were visible now on that granulated "screen," heading away from the camera. At least Jerry's ship was not alone in the face of that armada. His ship was one of at least a dozen — with more, possibly, outside the pickup range of the camera — involved on his side of the battle. Some of them shattered silently apart and boiled into the churning waters with a violence so great that Jerry could "feel" the sound with his eyes.

Apparently the medics, while anxious about the course of the fray, did not want their surgical endeavors bothered with the actual noise of the battle. Or perhaps the technology which had evolved this type of TV screen had never stumbled upon the familiar-to-Earth methods of

transmitting sound by electromagnetic radiation.

“HOW long can forty minutes last?” Jerry wondered in growing concern. By his own time-sense, warped by the life-span of his host, he felt he'd been present in that room well over an hour. And still he was captive to the environment of the scaly crystalloid raccoon/pangolin creature, and doubly imperiled of survival. Even if “his” side took the lead in the struggle, many fur-faces would need this treatment — which destroyed one of his species with each operation.

Jerry did not know whether or not the animals were chosen in any special order. But his mind told him that even were his host the last so chosen, his odds for survival were dwindling fast.

Assuming the wall against which his cage was stacked with the others were the same size as the wall opposite his cage — and symmetrical construction of rooms seemed a strong likelihood — then, judging by his cage-size, the maximum number of cages that could be so stacked was six high and four across, or twenty-four cages. Figuring one animal per cage, that left some twenty-one animals ahead of him.

Possibly — barely possibly — this tier of cages might not be against a wall. It might be the forefront of hundreds of rows of similar stacked cages. But no medic hurrying to save a life would walk to Row #2 when Row #1 was still undepleted.

“So if I just sit here,” he thought, gloomily, “I'm bound to end up alongside a fur-face on that table. My life gone so that his may survive. 'It is a far, far better thing I do' and so on, but I don't know as I'm ready to lay down my life for a fur-face without even being given the choice, damn it! Let's figure a way out of this mess!”

The ship went *whoomp*, suddenly. The room gave a crazy tilt again before — rather sluggishly, Jerry noted with alarm — righting itself. At the same moment the TV screen blanked out.

“Well, there goes the camera,” he thought, his insides feeling oddly cold and upset. “That may mean that if I don't die on the operating table, I may well be forced to succumb to a watery grave. Damn! *When* will those forty minutes be up?”

He was jerked from his thoughts by the appearance of a huge white-furred hand fumbling with the catch on his cage.

Hard, pointed black fingertips reached in through the opened

door for him. Jerry snapped and clacked his teeth upon them in vain, as he was carried toward the strap-sided concavity beside a new fur-scorched patient on the operating table.

"Use your head!" he screamed at himself. "These fur-faces aren't expecting an intelligent attack from a lab-animal! The other crystalloid creatures have the paltry instinctive self-preservation mechanism to bite at the objects gripping them, those impervious black fingertips. But you know better, right?"

And with that thought, Jerry tilted his head just a bit further forward, and let his orange fangs crackle through the thin chitinous green "flesh" beneath the stiff white fur on the alien's wrist...

YELLOW dispersion-medium spurted with a satisfactory gush from the scalloped gap in the alien's forearm.

Jerry landed nimbly on his hind feet on the metal floor as the shrieking medic dashed to a confrere for whatever first aid is given when a colloidal creature's liquid contents are spilling out.

While a minor part of his mind wondered idly if they'd employ a tourniquet or just a cork, the rest of his mind concentrated on directing those forepaw-and-foot phalanges to carry

him swiftly up the face of the stacked cages. There were twenty-four of them, all right, against the wall. He perched precariously on the top, in the cage-roof-to-ceiling space that was too small for another layer of the same.

As the fur-face medic fiddled around with the wrist of the man Jerry had bitten (it was the raccoon/pangolin medic, of course), the anesthetist dragged a small stool over to the base of the stacked cages and began climbing up after him.

"Oh, hell," thought Jerry, cowering weakly against the wall. "If I had a piece of chalk or a charcoal stick I could write something. Or draw a picture, maybe, on the ceiling. Then they'd know I was intelligent, and — They'd probably use me anyhow. The middle of a battle is no time for writing learned scientific papers about new zoological 'finds.'"

Those black fingertips were coming for him, too carefully for a repeat wrist-crunching performance. If he were taken this time the bearer would handle with care.

Jerry skittered and scabbled for the corner near the wall, hoping to engage the anesthetist in a game of you-climb-up-at-this-point-and-I-run-back-to-that-point. But the fur-face had too

long a reach to make it practical. As Jerry cowered helplessly, those black fingertips gripped him about the throat with strangling force. It apparently made no difference if he died on the top of the cages or under the scalpel. He could only fend feebly with his paws at the creature as he was lifted down to the table and set into the concavity, dizzy and sick.

"White lightning?" he begged. "Come on, white lightning! Please, test, be over. How long can forty minutes last?"

Then the room gave a horrible shudder and all the lights went out.

Jerry, not yet strapped in place, heard the cries of the medics, and then the terrifying sound of rushing seas in the invisible corridor as the room canted swiftly onto its side. This time it did not right itself. A thick, falling-elevator feeling bunched up inside Jerry. He knew that the warship was plunging beneath the heaving surge outside.

He scrambled about on the floor — no, it was the wall now — almost brained by the crashing bulk of the operating table. He kept jumping futilely upward, hoping somehow to escape to the corridor and get outside the ship before all that water got inside this room.

Then icy tons of fluid crashed down upon him, flattening him against the wall beneath his feet. The cries of the medics were suddenly gurgles, then a brief, faintly heard sound of bubbling.

Jerry, trying to swim against the swirling pressures of the flood that now lifted him from against the wall and spun him end over end, could hold his breath no longer.

In despair, he felt his jaws widen and take in the chill liquid in which he was whirled.

It went in without gagging him, and did not come out. Not through his mouth, at any rate. It came out through long slots just in front of those auricular vents in his head.

Gills! Jerry was an amphibian.

Webbing, hitherto folded away, appeared on his feet. "I'll be damned," he sighed, with weary relief.

Then he paddled determinedly about in the utter blackness until he found a cage lying on its side, the door sprung open. Jerry got inside, closed the door until it caught as well as its broken catch would allow and settled himself for a nice wait.

"At least I won't have to worry about getting gobbled by a natural underwater enemy," he figured.

He had to wait another sub-

jective hour before the silent flash of white lightning lifted him out of his third, and last, Contact on Arcturus Beta.

VII

“ALL right, sir?” asked Peters, removing the bulky helmet with care.

Jerry sat up and nodded, blinking his eyes as he adjusted to his body once more. He was hard-pressed not to start testing his own joints and lungs and limbs for knowledge, and had to forcibly remind himself that this frail shell was his “normal” body.

Now to await the technician's analysis of the data.

Jerry, waving off Peters' hand, outstretched in automatic offer of assistance, sat up wearily on the edge of the couch. After a deep breath he got to his feet. Within the ship, the data-analyzer clattered busily.

“Some hot coffee, sir?” asked Peters, helpfully.

Jerry was annoyed at the effort it cost him just to talk. “That will go nicely, Captain,” he managed.

The technician leaned out the airlock door, his homely face split in a grin. “No problem with the aliens, sir,” he said to Peters. “Amiability indeterminate, but their basic weapon is infrasonics. They're built like hard bubbles,

sure suckers for bayonets or bullets. I don't think, with sonic-shields, we'll have much trouble with them.”

Peters, in the process of pouring Jerry's coffee, shrugged. “Well, we're not here to make trouble, either. The robo-rocket reported that the aliens live either at sea or at least always in coastal regions. They shouldn't object to our starting a settlement this far inland.”

“And,” said Jerry, suddenly, as he took the coffee and sipped at the hot brown liquid, “I suppose those worm-creatures and the horned lions are to be eliminated?”

The technician dropped his eyes. “We can't have new colonists getting pulled into those burrows, or impaled on those horns, sir.” He handed the report, translated by the machine into readable English, to Peters. The pilot scanned the sheets, and nodded.

“Seems easy enough,” he said agreeably. “Those jellyfish-things, and the flying apes are similar to species encountered before. They'll respond to simple gunfire. Removal of the worm-things will be automatic, once their source of sustenance is destroyed.”

Jerry continued to sip his coffee and made no comment.

“As for the lion-things,” Peters continued, “I doubt we'll

have to attack them directly, since their digestive mechanism calls for sulphur from those pits. When we cap off the pits, or dry them up, to clear the air for the incoming colonial wave, that should starve them out within a week."

"Less than that," Jerry remarked emotionlessly. "Being hungry they'll eat, regardless. Then, unable to go on to the next step in the process — the ingestion of the sulphur — they'll die of food-poisoning. Simple, neat and efficient."

Peters smiled and gripped Jerry's hand with his own.

"We have you to thank for the information, sir," he said, in obvious admiration. "At least we know we won't have to fight the intelligent aliens. We'll have the central regions; they'll have the coasts and seas."

"And—" Jerry pointedly withdrew his strong fingers from the pilot's hand — "what happens when Mankind decides to spread out? When the colony grows awhile, it's bound to want some of the coastal regions. Then what?"

PETERS looked uncomfortable, then said, "I don't think that's likely to happen, sir. Not for some time, at any rate."

"But it will happen," said Jerry, somberly. "It always hap-

pens. Earthmen meet new races, arbitrate a hit, sign pacts and move in. Then, when they're settled pretty well, they ask the other race to move out. It's almost a truism, Captain, that Earth can't comprehend anyone but an Earthman having any rights to survival."

The tight-lipped technician exchanged a look with Peters, then ducked back inside the ship. Adverse commentary about a Space Zoologist was dangerous. But no one had yet been broken in rank or discharged for a facial expression.

"Well, sir, you're entitled to your opinion, of course," said Peters, wishing he had the moral courage to duck inside after the technician and avoid conversing with Norcriss. The job was done; why not forget it?

Jerry, sensing the other man's discomfort, dropped the topic, and contented himself with sitting there in the increasing darkness, sipping his coffee. After a minute or two, Peters gratefully mumbled his excuses and went into the ship.

Jerry sighed, finished his coffee, then began to walk toward the edge of the clearing, to watch the stars glow more brightly than they could in the interference of the ship's lights illuminating the camp.

When he reached the rim of

