

T-Negative 17

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LIMERICK

by Mary Himmelbach

One day Captain Kirk was pursued,
By a yeoman who wished to be wooed.
But the tender young maid
Quite failed to get laid,
For the captain was not in the mood.

erratum p. 54,
Libe's Letter:
"1, 7 10"
should be
"1, 8-10."

T HE W ORLD OF S HORT W INTERS

by Hal Clement

A human being looking at the sky from the surface of his own planet tends to form the subjective impression that the brightest stars he sees are the nearest. In recent centuries, since logic has made some beginning at replacing impressions, many natives of Earth know better; they have learned that Rigel and Deneb, among the brightest objects in their sky, are actually hundreds of parsecs away, while the closest sun to their own is not even visible to the unaided human eye.

In a few cases, however, the impression is not far wrong. Of the twenty or so first-magnitude-or-brighter stars seen from Earth, one is Capella; and this system, as galactic distances go, is extremely close -- less than sixteen parsecs away. Just how long the trip takes is a matter for another discussion, since the question of warp speed is far more complex than appears in popular accounts of interstellar exploration; but the trip is not a major undertaking. There was every reason to be uneasy when human beings discovered that a possible Klingon foothold was developing in that system.

Capella, however, was a body of much interest to human scientists long before the incident of Star Date 4317 (popularized under the title "Friday's Child"). It was of interest long before mankind had left its native planet; in fact, it formed the subject of a joke which apparently originated when astronomy was mainly a navigational subject on Earth. It seems that the government of a human political division called France decided that its soldiers should learn some descriptive astronomy, and arranged accordingly. An instructor was pointing out Capella to a group of soldiers, when the non-commissioned officer of the group was suddenly bothered by the observing attitude required by the fact that this star passes within three degrees of the zenith at Paris, the capital city of the political division concerned. After gaping helplessly for a moment, the sergeant cried out, "Mon Dieu! They'll break their necks! Squad -- one hundred paces to the rear -- march!"

More seriously, Capella's physical nature combined with its relative nearness to give human scientists their first real insight into the detailed structure of a star. To understand this, a little of the history of human science must be related. It will be assumed that the reader is familiar with the calendar used by the more industrialized groups of human beings just before space travel was mastered.

During the latter half of the nineteenth century the art of photography combined with the construction of ever larger telescopes and the empirical development of spectrometry to permit

not only quite detailed chemical analysis of stars but also reasonably accurate measurement of their radial velocities -- that is, their motion component toward or away from the Solar system, along the line of sight.

It was quickly discovered that many stars varied regularly in radial velocity. The human astronomers were logical enough to attribute this to orbital motion; indeed, they quickly developed the obvious geometrical techniques for calculating the orbits of these "spectroscopic binaries." They had been familiar with visual binaries -- systems wide enough for the separate stars to be distinguished by ordinary telescopes -- for a century or so already, and had applied the principles worked out by Johann Kepler and Isaac Newton on their world to calculate the masses of the stars in such systems.

Unfortunately these calculations were limited in accuracy. The formulae necessarily included the linear size -- miles, kilometers, or astronomical units -- of each orbit concerned; and this size could only be calculated for the visual systems if the distance were known. This could be determined only by direct trigonometry, with the earth's orbit as the base line, and was seldom known to better than one significant figure.

Frustratingly, the spectroscopic orbits were in linear units, since the observations were in miles or kilometers per second; but a major uncertainty prevented these units from being applied directly. As Fig. 1 shows, two different systems could give identical velocity curves if their inclinations to the Solar system differed by the right amount. In other words, the true

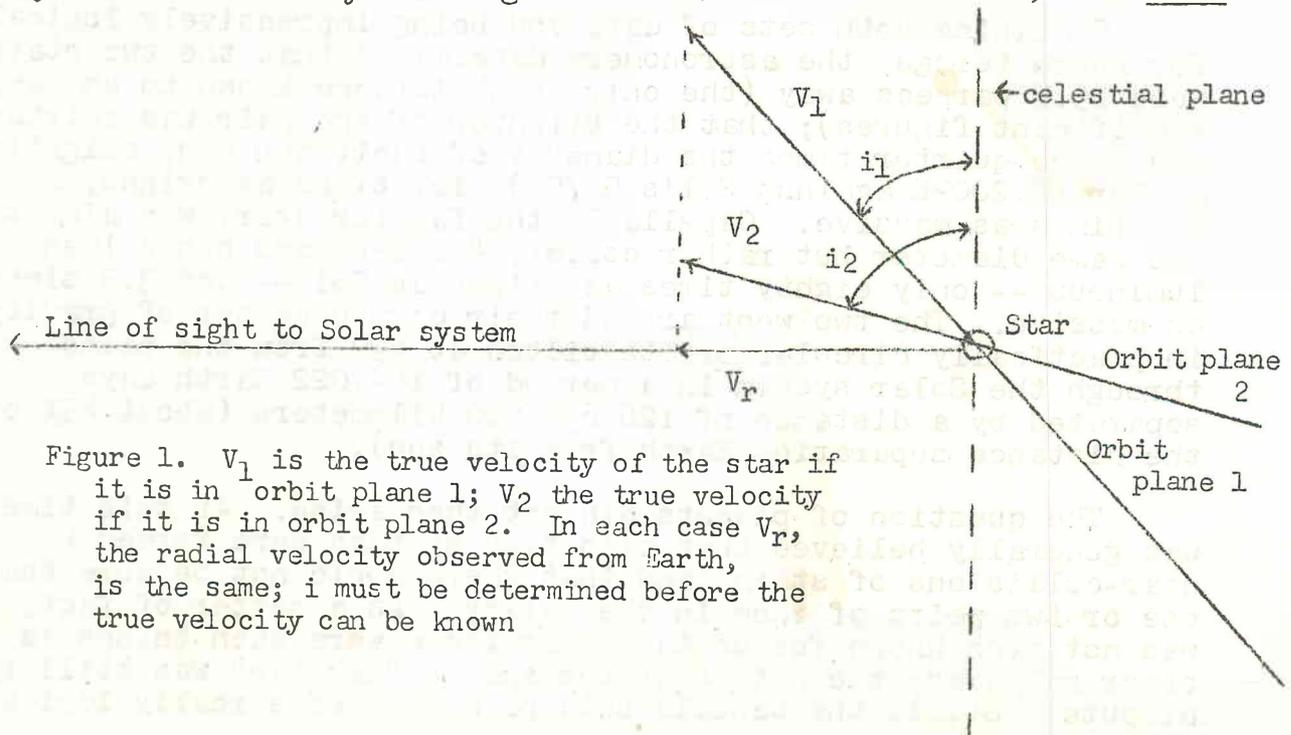


Figure 1. V_1 is the true velocity of the star if it is in orbit plane 1; V_2 the true velocity if it is in orbit plane 2. In each case V_r , the radial velocity observed from Earth, is the same; i must be determined before the true velocity can be known

size of the orbit was not known; it was multiplied by the sine of the unknown angle i . Sometimes, as in eclipsing systems, i could be determined; but in general, such systems had their stars so close together that they influenced each other's composition and structure quite grossly. It could not be taken for granted that such stars were typical.

What was needed, therefore, was a system for which both spectroscopic and visual measures were available -- the latter could also be used to find i . Until well into the second half of the twentieth century, Capella was the only such system known to human astronomers.

At about the start of that century it had been discovered to be a spectroscopic binary, with a period of about 104 Earth days. It did not show eclipses, so i was not 0° . It was merely one spectroscopic binary of many until about 1920, when an ingenious human being applies the interferometry technique to the measurement of very small angles. This, in conjunction with what was then Earth's largest telescope (approximately two and a half meters aperture) permitted the determination of a number of stellar angular diameters -- all giants or supergiants such as Aldebaran and Antares -- and a set of visual orbital elements for one system -- Capella. This work was not actively pursued for long -- apparently the stellar interferometer of the time was an extremely unwieldy device -- and for about half a century Capella remained the only binary system for which both visual and spectro-metric information was to be had. However, that information was used.

Combining both sets of data and being impressively logical for human beings, the astronomers determined that the two stars were 15.8 parsecs away (the only such distance known to so many significant figures); that the brighter of the pair was thirteen and three-quarter times the diameter of their own sun, slightly cooler ($5,200^\circ\text{K}$ against Sol's $5,750$), 127 times as bright, and 4.2 times as massive. Capella B, the fainter star, was almost the same diameter but rather cooler, $4,650^\circ\text{K}$, and hence less luminous -- only eighty times as bright as Sol -- and 3.3 times as massive. The two went around their common center of gravity in practically circular orbits tilted at 49° from the plane through the Solar system in a period of 104.022 Earth days, separated by a distance of 126,630,000 kilometers (about 85% of the distance separating Earth from its sun).

The question of planets did not then arise. At this time it was generally believed that planetary systems were formed by near-collisions of stars, and that there could not be more than one or two pairs of them in the galaxy. As a matter of fact, it was not even known for certain that there were such things as other galaxies; the nature of the spiral "nebulae" was still in dispute. Still, the Capella data permitted some really logical

astrophysical reasoning to be carried out. About the time of the births of the Galactic historians Asimov and Clement, a human astrophysicist named Arthur Eddington published a book called The Internal Constitution of the Stars based very heavily on the Capella information, which was still required reading for astronomy students half a century later. Capella was therefore an extremely well known star at this time, if "well known" could be applied to any star by a race which had not yet left its own planetary system.

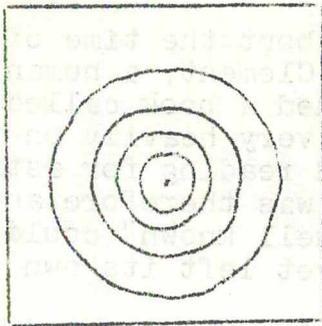
Even after more rational theories of planet formation were developed, in the middle and later twentieth century, no one bothered to look for planets near Capella. There were two excellent reasons.

One was that even a gas giant like Jupiter could not possibly have been detected at that distance by any instrument in man's inventory at the time. If it were close enough to Capella to be well enough illuminated, it would be far too close to be separated; if far enough out to be resolved, it would be many times too faint.

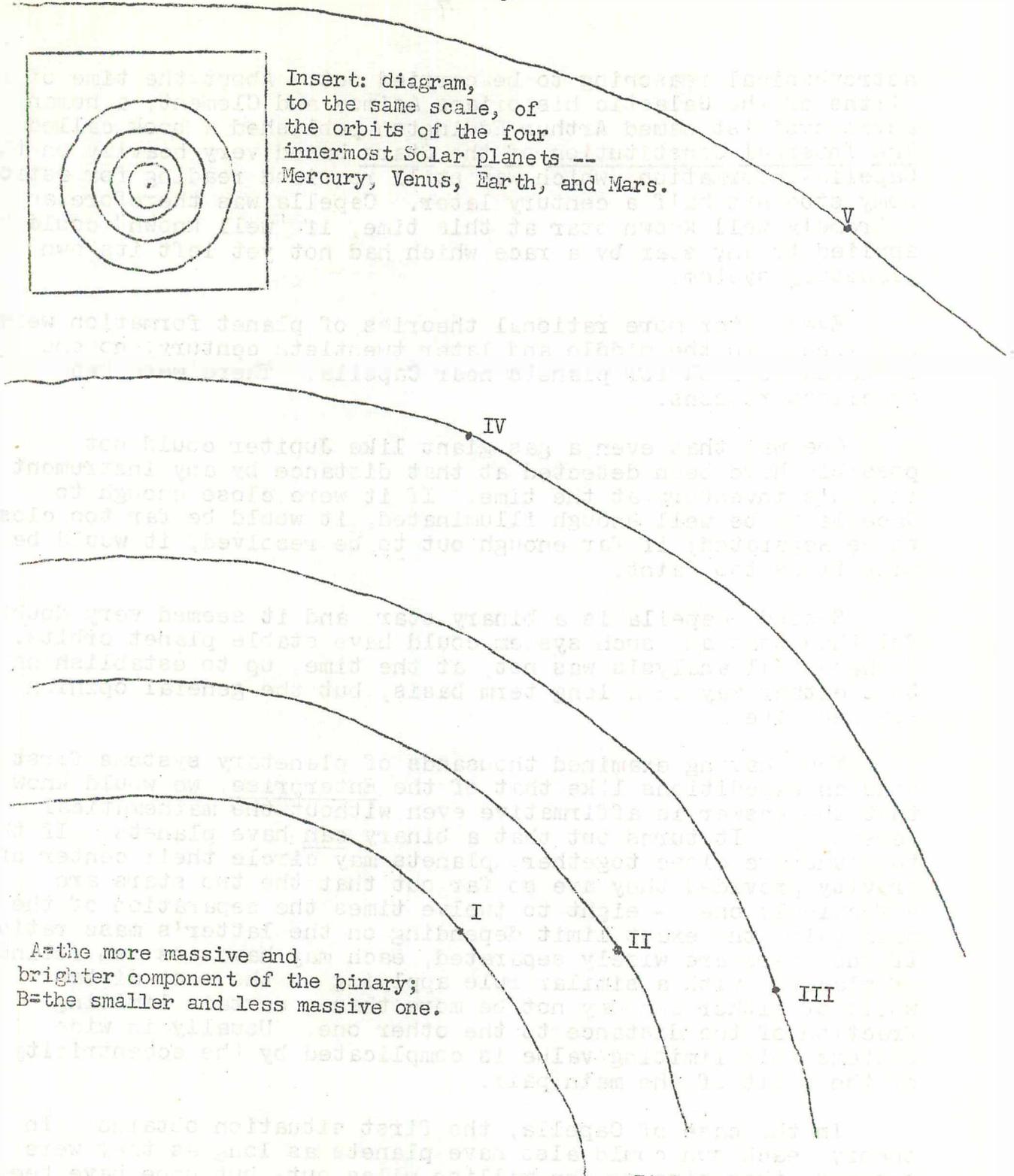
Second, Capella is a binary star, and it seemed very doubtful then that any such system could have stable planet orbits. Mathematical analysis was not, at the time, up to establishing this either way on a long-term basis, but the general opinion was negative.

Now, having examined thousands of planetary systems first-hand on expeditions like that of the Enterprise, we would know that the answer is affirmative even without the mathematical reasoning. It turns out that a binary can have planets. If the two suns are close together, planets may circle their center of gravity provided they are so far out that the two stars are effectively one -- eight to twelve times the separation of the main pair, the exact limit depending on the latter's mass ratio. If the stars are widely separated, each may have its own retinue of planets, with a similar rule applying -- the most distant world of either sun may not be more than a certain limiting fraction of the distance to the other one. Usually in wide systems this limiting value is complicated by the eccentricity of the orbit of the main pair.

In the case of Capella, the first situation obtains. In theory, each sun could also have planets as long as they were not more than nine or ten million miles out, but none have been noticed. Such planets would be interesting worlds, but rather difficult to explore; their minimum possible temperature would be about $2,500^{\circ}\text{K}$, well above the melting points of any of the common metals such as iron or platinum. Whether they should be called planets or stars is debatable; they would be shining visibly with thermal radiation, but they would not be providing their own energy. Someone would have to reword, carefully, the usual definition which separates the two classes.



Insert: diagram,
to the same scale, of
the orbits of the four
innermost Solar planets --
Mercury, Venus, Earth, and Mars.



A=the more massive and
brighter component of the binary;
B=the smaller and less massive one.



Center of mass of the system

Figure 2.
Diagram of the Capella system.
Scale: 1 cm=1 A.U.
(Astronomical Unit=
92,800,000 miles)

Starting about eight astronomical units (roughly three quarters of a billion miles) from the mass center of the system, however, is a series of five rather unremarkable worlds. All are Terrestrial in type, in the sense that they are essentially solid bodies rather than Jovian type gas giants. (In this connection, Selkor of Vulcan has made the interesting suggestion that binaries of nearly equal mass, such as Capella, keep most of their angular momentum in the two suns and cannot produce distant, massive planets; single stars like Sol, on the other hand, are quite likely to have gas-giant attendants some distance out, such as Jupiter, which carries about 98% of the angular momentum of the Solar system.)

The planets are described in Table I, with Earth (Sol III) included for comparison. Capella IV, as is known to all those familiar with the dramatizations of the Enterprise reports, is inhabited by a fully humanoid race. The group encountered by the Enterprise personnel is at about the cultural level shown by the Bedouin or Plains Indians of the nineteenth century. No really detailed study of the customs of this culture has been made, though it seems to have been influenced, as might be expected, by the binary nature of the sun.

The orbits of all five planets are close enough to the plane of the main binary so that eclipses are never missed when the suns pass conjunction. In the case of Planet IV, these eclipses occur every 55.8 days (of the planet, that is; about every 52.3 Earth days). They last from three to four days, the variation occurring because the orbit planes do not match exactly.

Table i

Planet	Orbital radius (A.U.)	Mean Temp. (°K)	Period (Years)	Rotation (Hours)	Diameter (Earth=1)	Mass (Earth=1)	Gravity (Earth=1)
Earth	1.00	290	1.00	24.0	1.00	1.00	1.00
Capella I	7.81	395	7.97	177	0.41	0.062	0.37
" II	9.74	353	11.11	45.2	0.83	0.60	0.85
" III	12.03	318	15.47	31.7	1.12	1.51	1.21
" IV	15.23	274	21.63	22.5	0.78	0.55	0.90
" V	21.45	237	36.3	18.4	0.92	0.75	0.88

Radiation input to the planet may drop as much as 60% for the middle day or so, depending on which of the suns is being eclipsed by the other and how completely, so a noticeable temperature drop occurs.

The phenomenon therefore attracts the notice of the natives, and the roughly eight week interval involved is their primary "long" time period. The true year means little to them. The planet's axis is almost perpendicular to its orbit plane, so there is practically no seasonal change through the year; and the nearly 22 Earth-year interval involved is too close to a normal total lifetime for them to notice its cyclic nature from such relatively subtle factors as constellation changes. Akaar, who died during the Enterprise visit, was an elderly man probably approaching the age of two. Since Leonard James Akaar seems nevertheless to have been his only heir, the typical life span and infant mortality rate of a nontechnological culture may be inferred more clearly than is usually appreciated by members of more scientifically sophisticated species. Unless some very critical aspect of the Capellan culture has been missed, it seems most unlikely that Akaar did not marry until the much younger Eleen reached maturity, or that he never begot any other children.

Possible religious implications of the eclipses to the Capellans deserve further study. Certainly on Earth, in spite of the regular and easily observable motions of its large satellite, which should have provided a simple logical explanation for eclipses, both the solar and lunar ones were supplied with an impressive variety of mystical explanations. The apparent motions of the Capellan suns are even more regular, though observation may not be as easy -- it is just as hard to look at them directly as it is to view Sol from Earth, and a race whose livelihood depends on good eyesight has presumably learned not to take that particular risk. Still, opportunities must occur near a dusty sunrise or sunset or through a hazy sky, just as happens on other worlds; human beings knew that their sun was round long before they had a written language. Of course, the Capellan eclipses are accompanied by world-wide cloudiness and precipitation, as might logically be expected, but there are gaps in the clouds there as elsewhere. As said earlier, research is very much needed.

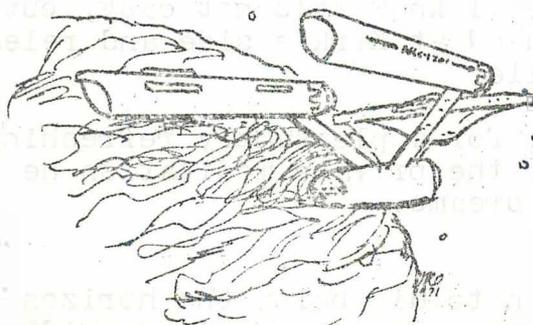
The question of the origin of this race also should be studied. Both Capella suns are giants, well off the main sequence, and well toward the end of their evolutionary life. Stars of such large mass do not grow much more luminous than before as they approach hydrogen exhaustion, though they do become larger and cooler; but they run through their fuel reserves quite rapidly even in the relatively long-lasting main-sequence stage, and it is very unlikely that the Capella system has been in existence for more than a hundred million years or

so. It seems rather doubtful that any planet could give birth to life and evolve it to the humanoid level in such a short time, though the point is still being disputed.

The obvious alternative is that the planet was seeded, and the humanoid "natives" and doubtless many others of the local life forms are descendants of a colony. This has happened often enough; and the usual situation, unless unusually long and close contact is maintained with the mother world, is for the colony to lose all its original culture and history and drop back to the pretechnological level, even if it survives at all, while establishing ecological equilibrium with its new environment. The Capella situation is therefore not surprising, but the question of what and where is its parent world remains open.

One suggestion seems worthy of further attention. Scarcely a tenth of a parsec away -- fantastically close as interstellar distances go -- is the system called Capella H by early human astronomers. It, too, is a binary, quite wide enough to permit its individual suns to have planets. They are dwarf stars, the brighter of the two having only about a fortieth of Sol's luminosity, and their habitability zones must be extremely narrow. Still, no one has examined the little system at all closely, and no one knows whether either star does or does not have a planet within the appropriate distance-temperature range. If so, that world would have had plenty of time to evolve intelligent life; life able, perhaps, to cross that short gap to the presumably interesting Capella even if it never managed to develop the warp drive or any equivalent. A main sequence star that far down the mass/luminosity list can simmer along for half a trillion years or so without much change in output, and that is time enough for evolution to do anything that is possible at all.

The Enterprise should go back and have another look at the Capella neighborhood, with a good archaeological team aboard.



SPOCK'S NEMESIS

Part 2

by Jacqueline Lichtenberg

SYNOPSIS: On a six-year, exploratory mission outside Federation territory, the Enterprise is trapped in orbit over a Vulcan-type planet peopled by a Vulcanoid race who have turned the Science-of-Mind into a weapon. They have erected a dze-ut', a tower-like device which ensnares the mind and confines it to a closed memory loop. All the Enterprise crew lie unconscious while Spock fights his way back to reality and takes Captain Kirk, Dr. McCoy, Scotty, and Nurse Chapel -- the only crewmembers he's actually touched minds with before -- down to the planet in the shuttle. There he rouses them, and they set off, on foot, to dismantle the dze-ut' in which they believe T'Aniyeh (Tanya), Spock's betrothed, to be imprisoned. But, as they reach the wall of the crater in which Spock landed the shuttlecraft, they are attacked by natives who engage Spock in a weird battle of minds. When, with Kirk's aid, Spock throws a mind-grenade at their attackers, Kirk is rendered unconscious. When he regains consciousness, the natives are gone, McCoy is treating his injuries, and Spock is withdrawn into meditation. When Spock rejoins them, they continue along the line of march and take shelter in a dirt cave left by the harvesting of a species of underground tree which is also common on Vulcan. While Spock is constructing a protective device from his raw materials, Kirk asks the Vulcan what he learned of the natives during his mind-duel. Spock expresses a deep-seated revulsion for the native way of life, and, in the ensuing silence, Kirk accidentally attunes himself to Spock's mind. Spock shakes him out of it and sends him off to sleep. Late that afternoon, Kirk wakes to Spock's hoarse cry of "No!" But Spock is reluctant to explain his behavior.

CHAPTER 6 THE BLOOMING

The Vulcan met his eyes. "She knows, Jim. She's waiting..." He had the shaking under control now, and he sighed. "But there's time. There's enough time."

As Kirk absorbed this, Spock shifted his attention back to the wrist he held, loosening his grip. "Captain, you absolutely must control yourself. I know it's not easy, but you must wait." Firmly he placed the hand at Kirk's side and released it. "I'll be back in a short while."

Then he was gone: for a pleasantly refreshing stroll in the 145° sunshine, and for the private meditation he needed as a human needs sleep and dreams.

When the sun began to dip below the horizon, they started on their night's journey. The dusk passed swiftly, and full night enveloped them as they toiled up low rolling hills and down. The whole universe consisted of a small puddle of light just where the next foot must be placed.

Spock had wired together an assemblage of his "raw materials," insisting that, if they all stayed together, it would keep the natives from getting a reliable fix on them. He carried the talisman swinging from his equipment belt like a monk's rosary and often fingered it absently as he led the group with a sure-footed ease the humans envied. He'd chosen the heaviest pack for himself and seemed hardly to notice the added weight.

They climbed, scrambled, slid and suffered through the heat of the night. Scotty toiled behind Spock, carrying a tricorder. Christine and McCoy trudged after the engineer, and Kirk brought up the rear with the other tricorder set to flash a warning at the approach of natives. Spock insisted the tricorders were useless, but Kirk kept them working nonetheless. At the very least, they could record for the ship's log.

Even with the sun gone, sweat streamed from every fold of Kirk's skin. It soaked through his clothes around his waist, at the crooks of his elbows, the backs of his knees, and at the crotch. He had to wear his shirt to ease the backpack, and sweat stained the golden knap to brown wherever the heavy load touched him.

He fell into a rhythm of ten paces and aswing around with the tricorder followed by another ten paces. Always in the back of his mind was Spock's apprehension that his mind-grenade had injured their attackers more seriously than anticipated. If they were badly hurt, they might not attack again -- and so much the better, as far as Kirk was concerned. Even through all his little miseries and big worries, he could almost laugh at the Vulcan. Considering his attitude toward the natives' way of life, Spock ought to take pleasure in the death of a few of them -- but no, he'd suffer a genuine, Vulcan regret over the death of even such an enemy.

At midnight, Kirk called a halt, and they sank to the ground, dropping their burdens and almost too tired to open their canteens.

After allowing herself two huge sighs, Christine rummaged through the packs and presented each man with his ration packet as if it were vital medication prescribed by a particularly strict physician.

She looked around for Spock, wondering whether she dared urge him to eat.

He was scuffing at the sand at the base of a hulking, black shadow about ten yards downhill, almost beyond the range of the field lantern. She shrugged and turned away, laying out his portion tidily on a nearby rock. It was always nicer when patients took care of their own needs. And she couldn't help but think of him as a patient.

But the Vulcan returned with a large, ellipsoidal object balanced on one shoulder. It was about the size of a small watermelon. He lowered it to the rock Christine had set his ration pack on. Absently, he swept the ration pack out of the way, and concentrated on examining his find.

The field lantern showed a dull gray stone with a porous, pitted surface. He took a tricorder and made a swift series of readings, even pulling out a contact probe to check something.

Seeing that the others were too exhausted to take an interest, Christine gathered her courage and approached the Vulcan. "Mr. Spock, you really should eat something. We've got a long way to go yet."

As rigid as the stone he was working on, Spock said, "I find your rations unacceptable, Nurse. I prefer my own discovery."

He stood and raised his stone above his head. For one horrible instant Kirk thought the Vulcan was going to hurl the thing at Christine, but he smashed it, end first, on the rock before him.

And it split open, falling apart in neat sections like the petals of a flower, or the sections of an orange. Kirk thought that it was very lucky the thing was coral-red inside. If it had been orange...Kirk shuddered. He'd rather not think about that.

In the center of the soft flesh of the melon was a flat, black ellipsoid about as large as a man's hand. Spock removed it and reverently buried it in the sand at his feet.

Then the Vulcan seated himself at his "table." "Would anyone care to join me?"

Horrorified, McCoy said, "You're not going to eat that, are you?"

"Yes, Doctor, that is precisely what I am going to do."

"But...but...."

Kirk had never seen Bones so close to apoplexy. He said, "Spock, do you think it wise...?"

"Captain, the body requires fuel to function. Certain types of fuel are acceptable...when others are not."

Kirk took a deep breath. He could order Spock not to eat from the native foods. But the Science Officer had, conspicuously, run the required tests. Obviously he knew the species. He also knew his own screwed-up metabolism better than any other living being.

Heaving himself to his aching feet, the captain went over and wordlessly accepted a piece of the self-slicing melon. Scotty and Christine joined him, but McCoy declined.

The melon was cool, tender, and tartly moist with a firm, smooth texture not unlike cantaloup, and it had a fragrance very like roasted salt nuts, a Denevian delicacy Kirk had learned to like. One bite seemed to lead to another until the rind lay empty in his hands, and his stomach lay peacefully content under his belt. His mouth and throat were gratefully moist, and the pervasive thirst was also gone.

He started to thank the Vulcan, then remembered his manners. He'd been invited. No "thank you" was required or welcomed. Instead, he went to where Spock had buried the seed and inserted the rind beside it with the care he'd learned on Vulcan. His duty to the generous plant discharged, Kirk turned to find Spock regarding him soberly. For a moment, Kirk felt a warm glow of approval in the Vulcan's glance. Then it was gone, like a door shutting.

Kirk took a deep breath and gave the order to move out.

They'd only been on their way again a few hours when, suddenly, Spock doused the light he was carrying and silently motioned them to take cover.

Like a ghost in the dark night, the Vulcan flitted between the humans and came to rest beside Kirk. "Captain, a party of twenty natives. Ahead and to our left."

Kirk jiggled his tricorder. "I don't get a flicker."

"They're there. Though I don't know if they're looking for us."

"Can they spot us?"

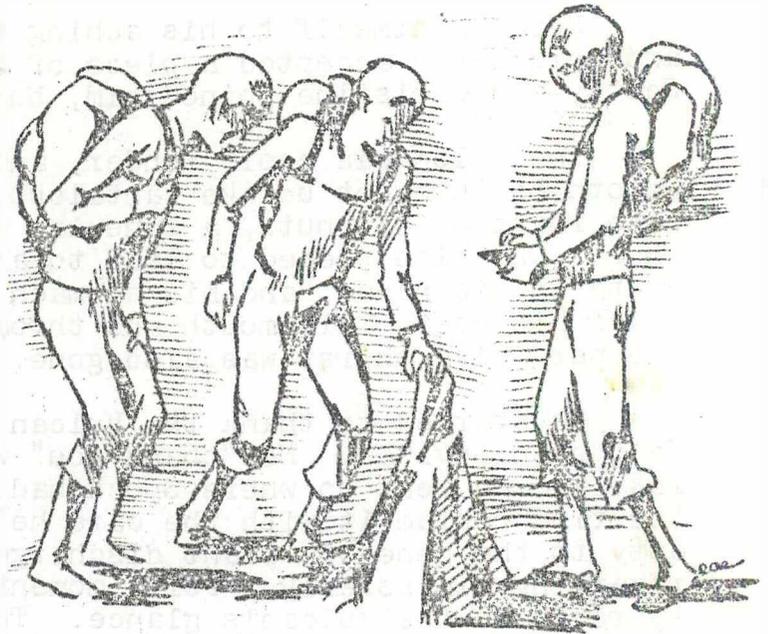
"I doubt it."

"These hills should be adequate cover. Are they camped or moving?"

The First Officer brought out his orange and green stones and struck a picture for the captain. Deep in the green crystal a tiny scene glowed.

There was a fire...the friendly, red-orange of a wood fire... and huddled about it were ten...no, fifteen natives. Tall, thin, expressionless men with long, black hair drawn tightly back

and bound at the nape of the neck. They were dressed in scanty black and white uniforms vaguely reminiscent of ancient Egyptian cup-bearers. Another five men, cast from an identical mold walked sentry in a large circle about the camp. One of the self-slicing melons lay open and partially eaten on a rock, its black seed left carelessly to dry in the open.



The humans waited a few minutes. Then Kirk said, "If they'd spotted us, they'd have moved by now."

"Yes. I think if we circle wide enough, we can avoid them. They must be a logging team."

Kirk felt a new surge of disgust well from Spock.

"What is it?" he asked, his hand reaching toward the Vulcan in the darkness.

The picture flicked out, and Kirk couldn't even see Spock's face. He felt the unvoiced rejection and withdrew his hand. But he didn't need contact to guess the source of that disgust. The sentries walked under the control of one mind.

They unlimbered a climbing rope, set one of their lanterns on very dim, and crept off at a tangent from their original path, linked by the rope clipped through belt-loops. Kirk was certain the Vulcan would come back on course like a homing eel-bird. Nevertheless, he set Scotty to check with the tricorder.

If the going had been rough before, it was vicious now. Stumbling in this gravity was a severe shock, and falling was true disaster. Several times, when someone fell, they all waited anxiously for McCoy to check for broken bones and then heaved sighs of relief at narrow escapes.

Even so, Spock's anxiety at the long detour made him quicken the pace until they were all ready to cry for mercy. Eventually,

dawn paled the sky, and the voracious sun began to suck the juices from their bodies. They were about where they'd planned to be according to their map, if they could trust the tricorder at all. Topping another of the infinity of low, rippling hills, they paused for breath, and Kirk said, "Spock, it's time to think about shelter."

"Past time, Captain. But it should be no problem. We're still in the logging forest. Do you see that cluster of young saplings on the far slope?"

Kirk peered through the growing dazzle, trying to sort out the long shadows. "All I see is boulders. I need a tricorder to tell a tree from a rock even after sun-up."

"There's a hole in the pattern of growth that must represent a harvested nodule."

"If you say so. All right, let's go."

They struck off again, drawn forward by the thought of a comfortable haven from the growing heat. And it seemed only two or three lifetimes until they crawled into their new shelter. Kirk hadn't ached so much since field basic, and he was so tired he honestly didn't care if he never moved again. He fell sound asleep without even removing his pack.

The others fared little better, but McCoy's professional conscience wouldn't let him rest until he'd seen everybody properly bedded down. After refilling the canteens for the humans, even Spock placed sleep highest on his list of priorities.

But the Vulcan allowed himself only four hours' replenishment and rose to work on the mindshields. That night they would enter the fringes of the field, and it was essential the humans be protected.

By mid-afternoon, he'd done all he could without testing his handiwork against the dze ut' field, so he went out to sit where it was warmer and drier.

That evening when they resumed their march, there was no more time or energy left for discussions. They plodded through the increasing darkness in grim silence.

And, late that night, they hit the dze-ut' field.

It was an utterly unspectacular event.

They were descending one of the infinitude of low, rocky ridges, scrambling and sliding in the loose, unseen gravel when Spock, ten paces in the lead, suddenly halted, flashing his light back to signal caution.

Then he backed up three paces, set his hand torch down on a rock, and advanced again. One pace. Pause. Two paces. Back half a pace. At that point he swayed back and forth for several seconds and then decisively drew a line in the gravel with the toe of his boot.

He turned and came up the hillside toward the group of humans. "This is the fringe of the dze-ut' field."

Kirk said, "All right, we'll take our break here while you get your mindshields ready."

With a weary sigh, Scotty shed his pack and went to help Christine off with hers.

Kirk settled himself on a high boulder and twiddled the useless tricorder. He was well aware of the morale sapping fatigue among his crew. And he had an instinctive grasp of the importance of morale at a time like this. It could be the difference between success and failure.

So, when Scotty wandered off behind a boulder to visit with a sandpile, the captain climbed down and went to where Christine was listlessly groping in a pack.

Before he could get well into his pep talk, Scotty returned holding something behind his back and smothering a grin that could have lit up a half square mile of terrain.

Spock was seated just uphill from Christine, working over his rock collection. He didn't notice the engineer until he said, "Lass, I've got something that must ha' been put here by the Great Bird of the Galaxy just to cheer your heart." He brought his hand out from behind his back and presented a large, floppy yellow flower. The yellow petals were laced with a delicate white tracery of veins and the ruffled edges of the petals were outlined in phosphorescent purple. It looked like a cross between an orchid and an iris created by a royal botanist just to grace a queen's bridal bouquet.

Christine glowed like a young girl presented with her first corsage. She reached out both hands to cup the fragile blossom, feeling the soft texture, and sniffing for the scent. "Oh, it's beautiful, Mr. Scott! I've never seen anything so lovely! Where -"

Suddenly, Spock cried out, leaping to his feet, hands balled into white-knuckled fists, wide eyes rivetted on the colorful bloom in Scotty's hands.

Scotty froze in the act of handing the bright yellow flower to Christine. Christine froze in the act of accepting it. McCoy slowly drew his medical scanner, knowing it wouldn't tell him anything he couldn't see already. Kirk looked from the shocked group to his First Officer, who shifted his weight from one foot to the other as some horribly potent rage gripped him and seemed to shake him loose from his foundations.

Scotty was the first to move. He took one step uphill toward the towering Vulcan, holding the flower out until it was scant inches from Spock's chest. Spock stared at the blossom as if he were hypnotized by a swaying serpent's head.

Scotty said placatingly, "Mr. Spock, it's only a flower. A wee thing to warm a brave lass's heart. It may not -- "

Spock roared a full throated bellow of outrage and launched himself at the engineer.

The two went rolling downhill in a tangle of arms and legs with McCoy and Kirk scrambling behind them. Before the wild Vulcan could throttle the engineer, the other two men grabbed Spock's arms and heaved him back onto his feet.

Scotty picked himself up off the gravel, staggering a bit to avoid stepping on the forlorn remains of the flower.

But Spock wasn't through. With a single thrust of his



powerful arms, he sent both his captors flying and leapt at Scotty with a savage ferocity Kirk hadn't seen since Spock had almost killed him in the Arena of Challenge.

McCoy frantically motioned Kirk not to use his phaser and fumbled at his belt for his hypo gun while Scotty clutched Spock's wrists to keep those steely Vulcan fingers off his throat.

But Kirk crouched on the dark hillside, struggling with a memory. What had been the word T'Pol used to bring the Challenge to a standstill? It had worked on Spock even when he was deep in the...the...plak tow. What was that word!?

Suddenly Scotty's arm collapsed, and the Vulcan fingers closed about his throat.

Kirk took a deep breath and bellowed, "KROYKA!"

Spock froze. He shook his head dazedly. Then he eased off his pressure hold, rose, stepped back, and looked down at the motionless body at his feet. Stupefied, his gaze passed around the circle of human faces. Then, with stiff jerks, he moved off to the fringe of the lantern-light and stood with his head thrown back, hands clasped tightly in front of him, staring out into the impenetrable dark.

Kirk could see Spock's shoulders quivering as the Vulcan made a desperate effort to control the uncontrollable.

McCoy knelt beside Scotty, laboring feverishly to restore breath to that limp body.

Christine got her hand out of her mouth and went to help the doctor.

Shortly, Scotty groaned, a small, rusty gurgle. McCoy said over his shoulder to Kirk, "He'll be all right. Some bad bruises, but nothing serious."

Relieved, the captain nodded and turned his attention to his First Officer. The Vulcan's shoulders had resumed their natural slump, and his breathing had quieted. Kirk went cautiously up to the Vulcan and spoke in a soft whisper. "Spock?"

He thought he saw a slight nod. He said a little louder, "Spock, are you all right?"

With a deep sigh, the dark figure turned. "No, Captain. I am not all right. But it doesn't matter."

The wan light from the distant lanterns showed an older Spock, fatigue lines etched in charcoal down his face. The rough voice was lax, almost toneless in defeat.

"Spock, what happened? What was that...flower?"

The Vulcan took another breath of the warm night air, blinked once, and turned to stagger up the hillside. Kirk followed, sensing an explanation formulating somewhere behind those sunken eyes.

But when they reached the small circle of light and the pile of backpacks, Spock seated himself on a stone, propped his elbows on his knees, and folded his hands. Kirk waited while McCoy helped Scotty up the slope. Christine set about straightening up.

At length, Spock looked at Kirk and said, as if no time had passed since his question, "It doesn't matter, Captain. Tonight the Blooming will finish...everything."

"What blooming?"

Spock gestured in the direction of the smashed blossom. "That is the flower of a plant that Blooms about every eighty years. The species is very old. And it is dying out. But there are still a few areas where the Blooms cover the land on the Night of the Blooming."

He paused, then drew a deep breath. "Now I know why T'Aniyeh is frightened."

"I still don't get it. Why be afraid of a pretty flower?"

"Not a flower," Spock corrected wearily, "the Blooming. The natives we fought by the shuttlecraft must have known it was coming. They knew there was nothing I could do."

Kirk's frustration was mounting. Spock was often a bit obtuse in his "explanations," but he usually made sense in his fact-mincing way. "Now, wait a minute. Let's start over again. What will the...Blooming...finish? And why?"

"Everything. Because the whole plan depends on me, and I'm no longer functional."

"I've seen you function in worse condition. What's so bad now?"

"In a few minutes there will be more Blooms." He shook his head, looking off into the darkness, dismissing the whole affair. "It's no use. It doesn't matter."

"I don't recall ever hearing such a defeatist attitude from you, Spock. What's got into you?"

"It's the Night of the Blooming, Captain."

"Damn it, Spock, this isn't Vulcan!"

"Not while I breathe, it isn't. But the whole plan depends on my continued breathing, and that's almost finished."

"Why?"

"Because this is the Night of the Blooming."

"And how is that going to stop you breathing?"

"It's in the fragrance, Captain. It does...something... accelerates...." Averting his face from Kirk's eyes, he whispered, "It's...undeniable...."

The evasiveness finally rang a bell in Kirk's mind. "Ohhh! I begin to see." He thought a moment, then added, "But so infrequently? Eighty years? I'd expect seven years, perhaps...?"

"There is a theory that we are not native to Vulcan, Captain. If that is so, the plants we've seen here that are also found on Vulcan may well have been imported there, too."

"You don't think this could be the original home world?"

Spock shook his head. "This world is no more hospitable to the Blooming species than is Vulcan." He sighed hugely. "We almost wiped ourselves out with wanton slaughter...with the Bloomings coming less and less often, with fewer and fewer plants. We solved our problems. These people chose another road, the road to extinction. And they are well along it."

Kirk thought hard. The Blooming intensified the chemical imbalance that led to pon farr. On the home world, the plant probably tied the Vulcan physiological rhythm to the seasons. But transplanted to a new environment...Vulcan...or here...the rhythm was broken. In spite of this, the Vulcans had stabilized their population. But these people were committed to racial suicide. He'd have to see they didn't take the Enterprise with them. He said, "I'm beginning to understand the problem. But why did you jump Scotty?"

Face averted -- in pain? or shame? -- the Vulcan half-whispered, "It is forbidden to touch a Bloom. They are as precious as the life of a child. My reaction was not logical. I would apologize. But it does not matter."

"It does matter, Spock, but apologies can wait. We're wasting time. Have you finished the mindshields?"

"Yes. But I must adjust them to the individual patterns."

Kirk rose to tower over the seated First Officer. "Well, then, get busy. We're obviously not going to have all night!"

Unmoving, Spock said, "I don't trust myself. My control is normally somewhat erratic. At the moment, it is virtually nonexistent."

"I didn't ask for excuses, Mister. That was an order."

Chapter 7 CATHARSIS

The Vulcan looked up at the captain, the lantern light turning his face a jaundiced yellow and his uniform shirt a sickly purple. For a moment, Kirk thought he'd get solemn defiance or simply passive disobedience. But after long consideration, Spock moved to obey.

As he gathered up the strings of colored stones he'd laid out on one of the waist high boulders, he moved like a robot, lacking both the will to defy and the drive to succeed. He wasn't stalling. He simply didn't believe there was any use to his actions.

When he had his equipment in hand, the Vulcan turned to survey the humans who were watching him warily. The choice seemed difficult, but finally he said, "Mr. Scott, come with me... please." His tone was the impersonal one of command. He was relaying an order from his superior. That, after all, was the prime function of a First Officer.

Scotty hesitated, looking dubiously at the captain. Kirk nodded, and the engineer followed Spock down the slope to where he'd drawn the line marking the edge of the dze ut' field.

Just before they crossed the line, Spock halted, placed the four strings of uncut stones on a boulder, took one, and faced Scotty. From where Kirk sat, the conversation was inaudible, but Kirk was certain they were exchanging apologies. Shortly, they joined hands and took the remaining step across the line.

Scotty's knees buckled, but before he could fall, Spock placed two fingers on the engineer's forehead, and he straightened up as if nothing had happened.

Spock slipped the loop of stones about Scotty's neck and released his contact. The engineer looked around as if saying, "Is that all there is to it? I don't feel a thing."

Spock nodded and strode back up the hill to where he'd left the other necklaces. Scotty rejoined the group, motioning McCoy to go down next.

The process was repeated. Then it was Kirk's turn.

As they faced one another near the line of demarcation, Spock said formally, "I regret the necessity, Captain -- "

"Just get on with it, Spock. We've got work to do."

"There is greater danger for you than -- "

"I realize that, but there's no choice, is there?"

"I wouldn't know. But it doesn't matter. Come with me."

He marched into the field zone and turned just in time to stay the captain's collapse.

For one fleeting instant, Kirk glimpsed the seething cauldron of molten flame that was consuming Spock's body. Then it was shut from him by impenetrable lead baffles slammed into place, locking him into the solitary confinement of his own skull. It was like being isolated in an asensory environment. A scream of hysterical panic bubbled up into his throat.

Then two powerful hands gripped his shoulders, drawing him a few staggering paces uphill. "Jim! Relax. Give in to it."

But his heart slammed in his chest; his brain throbbed with increasing pressure; his lungs ached as if laboring to draw vacuum.

Suddenly it was gone. As if it had never been. The world came back. The panic dissipated, leaving only the minor throb of an incipient migraine.

He looked up. Spock stood before him, holding the chain of stones, looking concerned for the first time since he'd throttled Scotty.

"What happened?" asked Kirk.

"What I expected. You panicked. I tried to explain -- "

"All right. Explain now. Did I do something wrong?"

"No. The shield works both ways. A non-telepath doesn't notice. But you felt the cutting-off of a sensory awareness that's only just developing. Normally, you don't even realize it's there. But when it's gone...."

Lips pursed, Kirk considered. He hadn't really believed Spock's theory. James T. Kirk, a telepath? Ridiculous idea. But the others hadn't reacted like this. That seemed to be objective proof. Well, there wasn't time to worry about it now. "The question is, can I endure that long enough to do our job. Is there any way to lessen the effect?"

"None that I know of. Just remember you've spent almost all your life relying on your other senses. You should adjust readily enough."

Kirk nodded, bracing himself. "Let's try it again."

This time Spock merely handed the string of rocks to the captain. He put out his hand to touch it and was instantly plunged into madness. He hung on, fighting for breath, grimly determined. He wasn't going to lose his ship through cowardice!

Slowly the world became visible again.. solid reality.

Spock offered, "The brain is a remarkably adaptable instrument. It can learn to interpret almost any coherent signal-pattern."

Kirk nodded, panting a little. "I'm beginning to see." He put the circle over his head. "Will this stop the development of...what you feared so much...?"

"No. It would hasten it if we were to live long enough." Serenely, he added, "But it doesn't matter."

"Spock," Kirk said severely, "I don't want you to say that again. I will not tolerate a negative attitude. It undermines morale."

The Vulcan looked down at his captain, then off at the horizon. "Yes, sir."

"I'll send Christine down." He turned to march up the hill, then had a second thought. Spock had been avoiding Christine so diligently. He paused, inquiring with a cock of his head. Spock nodded passively, fingering the remaining chain. He didn't say it. He didn't have to. His negative attitude shone like an overloaded deflector screen.

Kirk shrugged and plodded up the hill cursing every centimeter of elevation climbed against the merciless gravity. It wasn't really all that much more than one standard g, but it was beginning to feel like twelve g's.

Spock went through the procedure for Christine with more clinical detachment than the most experienced bedpan jockey.

Then they formed up in marching line again and trudged off into the deserted night. Kirk took charge of the field lantern. The extra weight hurt, but he needed something solid to balance the nightmarish effect of all the para-psychic wizardry.

About an hour later they topped another rise and came in sight of the dze-ut'. Looking at it, Kirk thought the name had

an onomatopoeic sound to it. The guttural, ut' was the truncated cone erected on a jumbled heap of undressed stone that had been piled on the top of the highest hill in the whole "forest." It was still several miles away, but it glowed with a pulsating orange fire that made it visible against the black velvet night. In spite of its light, it shed no illumination.

A tall, orange ghost of a flame seemed to leap upward from the cratered center of the shorn top, pointing insolently at the heavens where the Enterprise rode its dreaming orbit.

The flame seemed like the voiced nasal, "dze-," the crackle of a whip.

"Spock. Do you suppose their guards will be out in full force...tonight?"

"Yes. Certainly." He eyed the captain gravely. "It normally takes several days."

They'd passed a few more of the Blooms and spotted their phosphorescent outlines in more distant nooks. They appeared to be unfolding constantly. The captain was surprised his First Officer was still in control of himself.

Kirk said, "My tricorder has quit completely. Can you spot any patrols with that green stone of yours?"

Spock reached into his belt pouch for the pair of crystals and brought them out. As he began to touch them together, his hands trembled uncontrollably. His fist closed over the stones, grinding them fiercely into his palm, and his breath caught as if to smother a cry of pain.

Then he swallowed and took a deep breath, and his face became again a mask. He struck the picture and swept the tandem receptors in a small semi-circle.

Watching intently, Kirk counted twelve small groups of natives...all males. They were effectively surrounded.

The picture winked out, and Spock staggered. The Blooms were everywhere now, and even Kirk could smell the heavy, bitter odor that rode the gentle night breeze. It intensified the feeling of nightmarish unreality that gripped him.

He only wanted to get back to the ship and take her far away from this mad planet. He said, "Spock, there are too many of them. We can't hope to slip through undetected. And we've seen what they can do when they catch up with us. Our phasers are useless against them. We'll need some kind of a weapon. What about that grenade you threw at them?"

The Vulcan looked grimly uncooperative. "Remember, Captain, these devices most often destroy the user."

The other humans, smelling another lengthy conference, shed their packs and settled into a circle about their trail lantern as Kirk and Spock found seats on a boulder.

Kirk shrugged out of his harness and rubbed a sore spot on his shoulder. "What are our chances of getting through these guards without a weapon comparable to theirs?"

"Virtually zero."

"That's what I figured. So what can we do?"

"You ordered me not to say that."

"What would you do if I ordered you to build us a weapon?"

"I'd ask what, specifically, you had in mind."

"Something with offensive potential that could be used from a distance."

"By whom?"

"Any of us."

"That limits it quite severely. I can think of only one possibility. But I doubt if I could do it at the moment."

"Will you be any more capable an hour from now?"

"No."

"Then hop to it. And remember you'll have to teach us how to use it."

"Since we were speaking hypothetically, I am curious to know what you would do if I refused to obey a direct order."

"I'd probably cry. Now shut up and get to work. That is a direct order."

Those upswept eyebrows climbed in real surprise, and Spock shook his head wonderingly. "I shall never understand humans."

Kirk didn't give him a chance to elaborate. He just walked away, leaving the Vulcan with his problem. Kirk knew that as long as a shred of Vulcan sanity remained, he could count on his First Officer. The real question was just how many more minutes Spock's mind would remain rational.

He dropped down among the humans and wiped his sweaty palms on his knees. McCoy said, "I don't like it, Jim."

The engineer contributed, "Aye. He's like a flywheel wi' a crack in it and a drive that's pumping in just a wee bit more momentum than's healthy. I wouldna wish to be anywhere near when he breaks apart...."

"I agree with you, Scotty. But we haven't much choice. Bones, isn't there anything you can do for him?"

"No. Nothing. If I try to use a tranquilizer on him, it would only weaken his will to resist, and he'd come out of it on a rampage."

Kirk frowned. "But you were going to use something like that when he had Scotty by the throat?"

"I didn't really know what was happening, then. Besides, a phaser stun would have been worse. The Vulcan nervous system is strange enough...and who's to say exactly how much of Spock is Vulcan? There just isn't anything I can do. But it doesn't matter." Kirk gave him a sharp glance, and he added, "He wouldn't let me. You know how they are about that sort of thing."

Kirk nodded. Scotty looked neutral. Christine was a silent automaton with a haunted look. Kirk made a mental note to recommend her for a commendation and a promotion when they got home. And a big fat bonus. And a leave to spend it on.

"Nurse Chapel," said Kirk crisply, "break out the rations. Looks like we'll be staying here for lunch."

"Yes, sir." Her smile at his attempted levity was strained, but genuine.

Meanwhile, Spock struck a small magensite nitron tablet in a shelter of rocks he'd piled on top of a large, flat boulder that stood about waist-high. Then he emptied his belt pouches onto the bench before his fire. Even from where he sat, Kirk could see the Vulcan's hands shaking. Every few seconds, Spock threw a glance at the dze-ut' tower, and Kirk could see the desperation build in those haunted eyes. Kirk felt that at any second the First Officer would just cut and run.

The captain rubbed his forehead, smearing the grime in the oily sweat, and ransacked his brains. There must be something they could do for Spock. He climbed to his feet and went toward his friend, determined to do something though he had no idea what.

Suddenly, Spock dropped one of the stones he was working on and clutched his hand as if burned. Then he bent double over the painful hand, kneeling on the coarse gravel as his whole body was racked with convulsions that forced a grating moan out between tight lips.

McCoy came running as Kirk knelt beside the Vulcan, grabbing his shoulders. "Spock?"

Spock shook off the touch with a jerk of his head, a soundless but frantic negation.

McCoy pointed his medical scanner and stared at it unbelievably. He shook his head. That much pain? Impossible. And..good-lord-in-heaven...the man actually had some blood pressure! He concluded his scanner must be as useless as the tricorder. "Spock, let me see that hand." McCoy knelt beside the First Officer. "Did you touch the fire?"

Again that jerk of soundless negation.

Kirk said, "Bones, you better not touch him."

McCoy sat back on his heels, biting his lips in frustrated concern. Christine joined the group, bringing McCoy's backpack, ready to produce whatever improbable bit of equipment the doctor should request. Kirk thought that if she said anything, she'd either scream or cry, and she just wasn't about to do either.

The magnesite-nitron fire struck dazzling yellow, blue, and red highlights in the necklaces that dangled against their uniforms. Kirk was nearly shaking by the time Spock took a deep breath and sat up, examining his hand. "It's no use, Captain. I can not."

McCoy captured the injured hand and opened the fingers, looking for something to treat. "What happened, Spock?"

The science officer turned to Kirk and said, "Do you believe in God, Captain?"

Startled, Kirk answered, "Well...I suppose I do, in a way. I guess it depends on what you mean...."

"Doesn't everything?"

"What's your point?" Kirk was intrigued. He'd never heard Spock discuss religion in personal terms.

But the Vulcan rounded on the doctor, who was vainly searching for an injury on the hand Spock seemed to have abandoned in his custody. "Doctor. When is life?"

"What? Spock, this is no time for one of your philosophical jags!"

"Can you answer the question?"

"No. What do you mean, 'when'?"

"When does a conglomerate of particles pass the border between the living and the non-living?"

"The more we learn, the less we know about that. In fact, it's debatable whether there is a border."

Spock picked up the rock he'd been handling and held it out to McCoy. "Is this alive?"

McCoy took it, pointed his scanner at it dubiously, and turned it over in the flickering light. It was a blue-green crystal, clear as glass...no, it had internal facets like a diamond. It caught the light of the fire and threw it back multiplied. It was beautiful. "Well, I don't know. It looks like a gemstone to me. It's certainly not like any life I've ever encountered before -- which doesn't mean much."

"Your caution is commendable, Doctor. But you don't really believe it to be alive. If it were life, say, on the order of the hydra or a coral colony, would you hesitate to destroy it for your own ends?"

"Depends. Not senselessly. But to save a life of a higher order -- myself for example -- yes. We do it all the time. Even you do that routinely."

"True." He continued to gaze into the blue-green depths as if searching for an answer, or seeking to apologize.

When it was clear Spock wasn't going on, Kirk said, "You pick the damndest time to wax philosophical."

The dark eyes flicked to Kirk and locked stares with him. "Jim, I can not. I am not able to do this thing. Millenia ago, my ancestors chose a different path. That decision is not mine to change."

"I'm not asking you to change it. Only to meet these natives with force in kind. We do that routinely on the Enterprise, too."

"This is not the Enterprise."

"But the discipline of the Service extends even to this situation."

"True. Up to a point."

"And a bit beyond."

Spock didn't answer that. Kirk motioned the others away. He wanted to try to reach Spock in private. When the humans had settled around their lantern, about ten yards away, Kirk said quietly, "I've never known you to give up like this."

"Nature's...imperatives...cannot be defied."

"I...I've brushed up against one of those imperatives... lightly...second hand..." Kirk pursed his lips and nodded. His recent contacts with Spock's mind had given him a deep respect for the power of the pon farr. "But, Spock, if you were really trying, you'd have found another way. What are you going to do? Just sit here until --" Kirk bit his lip. He'd absorbed some Vulcan manners in the last few years...and there were some things that just weren't spoken.

Kirk watched Spock's face. There was anguish there, or he'd turn in his captain's braid. Spock's answer, when it came, was a fierce whisper. "What do you know of it?"

"Oh, you've given me a jolt now and again. Or have you forgotten what happened when you plucked me out of dreamland?"

"That? That was nothing. Fringe effect. Spurious noise."

"I got another whiff of smoke when you gave me this." He fingered the necklace.

"Twenty orders of magnitude less than significant."

"That was hours ago. I'll grant it's much worse now. I'm not asking -- or expecting -- you to go much farther. But we need that weapon, Spock. If there's any conceivable way you can give it to us, we need it...if you're to accomplish your own... private...goals."

Spock looked off into the impenetrable night. "Suvil -- my father's father -- died experimenting with these things. He was an expert. He spent decads winnowing through fragmentary documents c^lassifying, systematizing, searching for something useful among the dross."

"And he taught you everything he knew?"

"Yes. But it wasn't enough to save him."

Frowning, Kirk asked, "Are you afraid to die?"

"At the moment, I am incapable of endangering my life. Soon that will pass. Then it will be too late."

"Well, we're not going to wait around for that to happen. We'll find a safer way to do the job."

"That is impossible."

"Oh? Have you tried?"

Surprised, Spock looked at Kirk. "No."

Kirk pounced on that, but in a low whisper that could not carry through the thin air to the other humans. "Now, that's what I call illogical! Spock, you've been sulking like a spoiled brat denied an icecream cone before dinner. Next you'll be crying crocodile tears into your beer and singing the blues. I'd like to impress your engrams on a computer -- the resulting torrential flood of illogic would be most amusing!"

For a moment, Kirk thought Spock had suddenly lost the ability to understand English.

Then the corners of the Vulcan's mouth quirked upward, and crinkle lines appeared under the upswept eyebrows. Slowly, as if cracking a sarcophagus mask, the stone face softened, melted, and poured itself into a smile that grew until little snorts of unsuppressible laughter bubbled out of the tense, Vulcan throat.

A phrase popped into Kirk's mind, "Like sunrise over a dark swamp." As the transformation took place before his eyes, Kirk became dismayed. It was like watching a schizophrenic switch from personality ONE to personality TWO.

But laughter is infectious. Suddenly Kirk saw the perfectly ridiculous picture he'd painted, and he began to chuckle.

Spock laughed experimentally.

Kirk guffawed.

The other humans were attracted by the noise and plodded over to see what was going on.

Deeming his experiment a success, Spock laughed heartily.

Kirk joined him.

In unison, McCoy and Scotty chuckled.

Christine snickered.

Spock was laughing with a singleminded concentration which loosed peals of laughter from the others.

Kirk gasped and tried to wipe the grin off his face with the palm of one hand. "Oh, come on now, it wasn't that funny!"

Spock was kneeling, doubled over with his head on his knees, wheezing helplessly. He seemed to be giving himself to the job enthusiastically, making no effort to restrain the mirth or to conserve energy for other tasks.

Worried now, Kirk said, "Spock? Honestly, it wasn't all that funny."

But the Vulcan's eyes were streaming as he shook soundlessly to wave after wave of convulsions, each stronger than the last. Without measuring, McCoy was certain that no human would ever attain such a state from laughter alone. Suddenly, the sight of Spock laughing didn't seem funny any more. McCoy knelt beside the captain. "Jim, what did you say to him?"

"I doubt if he'd appreciate my telling you. Why don't you ask him?"

"I'd be afraid to -- if he ever stops laughing." McCoy was awed by the scene, and more than a little apprehensive. Just how much of that Spock's system could take, he didn't know.

Kirk was beginning to be frightened by what he'd done.

Shaking his head, Spock drew a deep breath and let out another unrestrained howl of excruciating mirth. Now, Kirk concluded, he was laughing because he was laughing. He knew from experience that that was a positive feedback that could go on for hours. Resigned, he said, "Well, go ahead and laugh, but try to keep it quiet. We don't want to attract any unwanted attention."

At the next gasp, the First Officer massaged the unfamiliar ache in his jaw and went right on laughing, but more quietly.

McCoy and Kirk traded looks.

Kirk checked his tricorder for the time.

They waited.

After McCoy's awe had turned completely to grave concern, and Kirk's fear had transmuted to despair, the Vulcan's guffaws turned to chuckles, subsided to snickers, and vanished. His expression transformed from ear-to-ear-grin to ghost-of-a-smile that vanished into solemn stone sarcophagus. Eyes closed, relaxed, and opened again to reveal...Spock. The familiar, lively, but unemotional Spock.

One elegantly disdainful eyebrow arched slightly. "I see. Yes. Most curiously useful capacity." He frowned. "A secondary cathartic channel. Not total, and far from complete, but useful." Both eyebrows in innocent surprise. "Fascinating!"

The humans traded glances all around. Spock took the opportunity to rise.

Kirk checked his tricorder. Fifteen minutes. Undoubtedly a Vulcan record. Human blood! Scandalous.

Rising, McCoy said, "Tears are a third channel, Spock. Don't under-rate them. They can be even more effective than laughter."

And, under some circumstances, humans have been known to laugh and cry at the same time."

Thoroughly his old self again, Spock said, "So I have observed, Doctor."

Kirk made a mental log entry. "Commander Spock has demonstrated an intuitive grasp of human psychology under field conditions."

Spock was examining the array of "raw materials" laid out in front of his magnesite nitron fire. He chose several items from his stock and then paced out a large circle around the humans, placing his stones on the perimeter at precise intervals so that the magnesite-nitron fire occupied the circumference just opposite a large, gold crystal. Then he motioned the humans to leave the circle. He took one of the other stones from his makeshift workbench, bound it to a long shaft which he produced from his pack, and held it into the hottest part of the flame.

Kirk knew the flame wasn't really very hot, but presently the stone began to glow -- that peculiar, clear orange color that he'd learned to fear. Spock took the glowing stone and planted its shaft in the center of the circle. Then he took another shaft, another stone, and held it in the fire. Soon it glowed blood-red, a fearsome, rich color far more chilling than the clear orange. This one he set aside as he repeated the procedure once more, obtaining a blue-green glow.

Then he took the red one in his left hand and the blue-green one in his right and travelled the perimeter of his circle, touching each of the markers with the red stone and then with the blue-green. As each marker-stone was touched, it took fire and glowed with its own hue until the circle was a rainbow against the dark night.

Kirk didn't notice when somebody extinguished the trail lantern. The fire and the multi-color glowstones were the only source of light under the stars.

When he'd finished his circuit, Spock seated himself cross-legged facing the fire, still holding the red and blue glowstones on their short, black poles. The top of the Vulcan's head came almost level with the bottom of the magnesite fire enshrined on top of the boulder.

Then nothing happened. Nothing happened for so long that the humans sat down, too.

The steady glow from the circle of lights, the darkness around, and the silhouette of Spock with his deeply lined face lit by the eerie blue-green and blood-red glowstones he held, combined to create a hypnotic effect that soon had Kirk's eyes drooping.

He fought that drowsiness valiantly for many hours. But the gravity, thin air, heat, and fatigue finally won.

Chapter 8 BREAKING POINT

Hot fingers of sun were burning his neck when Kirk woke. He squinted against the brilliance. Scotty, McCoy, and Christine were beginning to stir beside him. The circle had been dismantled, but the magnesite fire still burned. The three glowstones, planted to form a triangle in the center of the circle, still glowed visibly against the sunlight of early morning.

Spock stood before the waist-high rock table where the blue fire still dwelt behind its rock shield. His back was to Kirk, his arms braced stiff, propping his shoulders up while his head drooped on his chest. He looked like a deflated scarecrow.

Kirk staggered to his feet, ignoring the sharp ache in his joints. "Spock?"

The Vulcan shifted his weight. But he gave no other response.

Kirk stumbled forward, cocking an eye at the bright sky and the swiftly vanishing shadows. "Spock...."

The Vulcan turned, a hundred years older, drained, but taut as a lytherette string. Gesturing to the three glowing stones, he said in a rusty whisper, "Take them. No living thing will menace you as long as you hold them."

"Fine. But what about you...?"

There was a haunted desperation beneath the Vulcan's dry, cracked surface. He was breathing hard, and his usually neat hair was matted in dirt-encrusted spikes. His face glistened with the oily, Vulcan perspiration. His eyes were wild, shifting pits of darkness that returned again and again to the dze-ut' tower.

"Spock...."

"Leave me alone! LEAVE ME ALONE!" It was the scream of an outraged animal pushed beyond fury, beyond madness.

Before Kirk could move, Spock bolted down the hill, careening in a wild gallop around the largest rocks, leaping others, heedless of scrapes and bruises.

"Bones! We've got to stop him!" Kirk snapped as he took off after his First Officer.

Unable to control his headlong dash down the hill, Kirk leaped a small boulder, climbed the next, and launched himself in a flying tackle at the Vulcan, who was starting up the far slope.

The captain landed soundly on top, and rolled desperately, trying to evade the sledgehammer blows of flailing arms.

Scotty arrived just as Kirk tripped the Vulcan and knelt on his back, capturing his right arm in a hammerlock. The engineer threw himself on the First Officer's left arm, heedless of the clouds of dust. McCoy came between them with a hypo to the base of Spock's spine.

Five seconds later, Spock was out cold, and the humans relaxed.

"Bones, how long will that hold him?"

"Eight, maybe ten hours. But when he comes out of it, nothing will stop him this side of the grave."

"Except..." said Kirk.

"Right. Except...."

Kirk sighed, scanning the hills. He could see patches of Blooms everywhere. The bitter smell had turned stifling-sweet. Thankfully, he spotted a dark hole that promised some shelter and an opportunity to refill their canteens. "Help me get him up there." Kirk pointed out his refuge. "We'll take the dze-ut' apart in broad daylight since we've no choice."

Sweat streamed off them, making two-inch rivulets in the accumulated grime before the air could suck up the rare moisture. Drops fell from Scotty's chin and evaporated almost before striking ground. But, somehow, the three of them hauled the limp, dust-caked body up the hillside and into the shelter.

Kirk staggered back outside wiping his brow in the crook of his elbow. "Come on, let's get Christine and the packs."

An hour later the three men were out on the desert-forest staggering under the burden of the vicious sun. They'd left Christine with Spock because McCoy insisted someone had to be with a man under such heavy sedation -- and because, he'd privately informed Kirk, she wouldn't be able to walk half a mile in the sun, pride or no pride.

They left their packs and took only their canteens, phasers, communicators, and the glowstones mounted on the short sticks... which Kirk now recognized as the legs of a tripod from the exploring kit. McCoy had his belt medikit, Scotty had a tri-corder slung over his shoulder, and, of course, they still wore the mindshield necklaces.

And that was almost too much. They were all sagging well before the sun hit zenith. Kirk called a halt as he took a new

line-of-sight reading on their target, plotting a course around the worst obstructions up the side of the next hill.

McCoy swigged sparingly from his canteen. "The one thing Spock didn't bring is sunglasses." He stoppered the canteen and snorted, "Vulcans probably never heard of them."

Kirk nodded ruefully and plunged down the hill with his improvised burnoose flapping in the breeze of his passage. There were a lot of things Vulcans had never heard of. Sometimes he wished he were one of them.

After miles of up-and-down-and-detour, Kirk noticed that the Blooms first exposed to the rising sun were wilting. They wouldn't last the day.

Later, he seemed to remember that 140°F. was the most the human body could tolerate. He was certain it was hotter than that already. His feet burned inside his boots, his nose and throat would never be the same again, and what he wanted most in all creation was to plunge into the cool, green depths of the Enterprise's swimming pool and set up housekeeping. No Vulcan would ever find him there!

He couldn't believe it when he dragged his sweat-glued eyes open and saw the orange glow of the dze-ut' right above his head. Some effort of will moved his numb legs one after the other until he'd swayed and staggered the last hundred yards uphill. He scrambled atop a boulder and looked to see Scotty helping McCoy get up off his knees -- or was it McCoy helping Scotty?

He lost his balance and plunged through the insubstantial, glowing orange wall -- and sprawled headlong on the cold, wet, smooth floor. The air was dense with fog droplets that glowed like orange gelatin, swallowing the light from the red glowstone-scepter he still clutched in one sharply aching fist.

He picked himself up, turning this way and that. Which way had he come in? Which way to damsel in distress? He felt giddy. He stifled a giggle and was suddenly seized by a gooseflesh shiver and a fit of trembling at the icy cold air. Wrapping his arms about his torso, he pulled his head into his shirt collar and remembered how Spock had shivered with cold after he'd accidentally contacted Tanya. She must be here.

He called, "Lt. Minos?" But it came out a miserable croak that barely carried to his own ears. He swallowed gritty sand and tried again while opening the canteen. "Lieutenant!" He took a swig of water, wiped his mouth on the back of his hand, stoppered the canteen, and shouted, "Lt. Minos! Tanya!"

McCoy's voice answered. "Jim?"

"Over here, Bones. See any sign of Tanya? Or of anything else?"

"No. They've captured a genuine Kentucky fog in here."

"I dinna think so," said Scotty. "It's a prime example of an Aberdeen fog -- except for the color."

A warm hand joined Kirk's elbow and then another on his other side. Kirk peered hard and could just make out the tousled hair of his engineer. McCoy's touch was distinctive enough. "Okay. Spread out in a line and move forward carefully. The first one to encounter something, sing out. And hang onto your glowstones! It's a long way back."

McCoy nodded, remembering all those natives that had eyed them cautiously from a respectful distance. Then he manned the end of their line and advanced.

The line jerked, and Scotty let out a Gaelic curse. "A wall here, Captain."

They converged on the discovery to find a large, rectangular box standing on its small end and open on the far side. They circled around until they all stood in front of the open side of the box. The fog was clearer here.

Kirk surged forward. "Tanya!"

McCoy pulled him back. "Hold it, Jim. Don't touch her. We've no idea what we're doing."

Kirk subsided. He had absolutely no idea what to do next. "All right, Scotty, have a look at it."

"Aye, sir. But, mind, I'm not this kind o' engineer."

"I know. Just see if you can untangle this mess into its components." Kirk surveyed the "mess" soberly. A cocoon of strings, ropes, and cables was woven about the girl. Glowing stones hung in festoons from her shoulders, pulsating in madly clashing colors. She stood on a clear, orange pedestal, rigid as a statue and as conscious as marble. Her eyes were open, but she did not see. Nothing appeared to maintain her balance, but she stood.

Kirk left McCoy and Scotty at work and circled around the box, keeping the fingers of one hand brushing the wall while he flailed the fog with the other. He struck something and let go of Tanya's box to go see what he'd found.

It was another box nearly identical to Tanya's, but it contained the biologist who'd gone down with the landing party. He'd been a small man. Now he was a crumpled mummy, shriveled and blackened grotesquely and shrouded in strings of dead jewels.

Shaken, Kirk circled back to the group and reported his find.

McCoy said, "She's alive, Jim, but more than that I can't say."

"I canna make anything out of this, Captain. There are nae circuits in the conventional sense."

Kirk chewed his lip, speculatively examining the misty ceiling. Far above, the Enterprise slept in orbit. His closest friend lay dying in a dirt cave. Neither could survive much longer.

The captain slipped off his necklace, dropped it into McCoy's hands, along with his blood-red scepter, and reached over to cup Tanya's stone-rigid, ice-cold cheeks in his hands. He had no idea how to establish mental contact deliberately. He concentrated on his need to know how to disconnect her from the circuit.

Suddenly his skull was riven asunder by a diamond chisel, split like a coconut smashed onto a gleaming machete. His mind was fragmented and sucked out by an irresistible vacuum, quick-frozen by an intense cold that turned him...inside out....

She was ensnared at the center of a complex web of forces, laid in intricate patterns throughout her mind. The dynamic throb of energy pouring in through some of those lines had to be re-vectored, focused, and sent coursing out along other lines before the next surge arrived. She could stop the outward flow, dam the energy within herself, and refuse the compulsion laid upon her. That much she'd accomplished by will alone. And it had been no small task. But it had taken too long. She no longer had the will to suicide.

His call burned in her.

It could not be denied.

She must break the web that bound her. She must be gone before those...savages...settled their quarrel and returned. It didn't matter which of them won first-rights to her. She would not allow another's Touch. She was already possessed. And she burned.

Her hands. She must move her hands. She must unweave the net that held her. First this thread. Now this. And the next. Carefully. None must touch the net. Freedom is dear, but not so dear as life. And danger is great where there is such power. The web is tangled. First this half of this line, then half of the next. Back to the first. Quickly now. Control diminishes. Fury rages. Body wild. It cannot be controlled. And it should not be. It is wrong to try. Swiftly new hands! We must leave. We are Called. When one cannot move, the other must. The way is long. Time is short. But not so short as life. Calm and steady hands... or all is lost. This line is alive. Handle it gently. I am nexus and focus. All power resides in me -- the others are all dead.

They were too weak of body and too strong of ignorance. They fought the power line and died. This line is the life of the hundreds above and of us below. Lift it stone by stone from my body, place each link carefully, oh so gently down on the base, make the circle exactly inscribed in the square, then spiral inward to the center. Now the right foot. Lift it toe first, then heel, put the next stone in its place. I am falling. It does not matter. Quickly, the last stone, exactly where the left toe was! before the heel loses contact.

AHHHHHHHHH!

The scream tore from two open throats, unmodulated, instinctive terror. The explosion numbed the mind, tinting every braincell, every bloodcell with bright, clear orange gelatin lit in a searing flash, destroying, welding, healing.

Kirk opened his eyes. Aside from a throbbing ache that pervaded his body, he felt reasonably well. The fog was already dissipating, revealing far to one side a steaming trough of water and two other upright, rectangular boxes near the wispy orange walls that were fading slowly, allowing more daylight to filter through. In places, the skeleton of the tower was becoming visible where the mist had already thinned.

The captain climbed to his feet, Scotty at his elbow. The engineer seemed bewildered, but apparently unhurt. Tanya lay on her back, a tiny figurine on the clammy, rough stone floor. McCoy bent over her as if afraid to do anything but read her vital signs. Kirk went to her, glancing at the medical scanner over McCoy's shoulder. Most of the readings were off the top of the scale.

"Jim, I've never seen anything like this -- "

Suddenly the lifeless doll rolled onto her stomach, got her legs under her, and stood.

Kirk said, "Tanya?"

Her back to the humans, she seemed intent on the horizon that was still invisible beyond the misty orange walls. She took three jerky steps toward the wall. Then, slowly, as if moving underwater, she broke into a run, leapt the water trough, and disappeared into the ragged orange mist.

"Jim! She's barefoot! And bareheaded!"

Kirk grabbed his glowstone and took off after the girl at a dead run.

Scotty and McCoy traded glances and plunged after. When they broke out of the mist, Tanya was already halfway down the hill, running lightly, oblivious of the scorching rocks. Kirk

was a hundred yards behind and not gaining. As she made the bottom of the hill, Scotty and McCoy launched themselves after the captain.

On the far upslope, Tanya hardly slackened pace, but Kirk fought a losing battle against the gravity and the air.

McCoy pounded up the hill. "Jim, wait! You'll never catch her like this." Huffing, the doctor slapped at his medikit. "Trix-ox...and a stimulant. Take a couple swallows...water."

When they'd all had the prescribed treatment, they took off again, at a saner pace. Scotty took the lead setting their line with the tricorder, which now worked fairly well on some circuits. They caught occasional glimpses of Tanya's head as she topped the next ridge. Several parties of natives watched from a distance. Every time they paused, Kirk tried his communicator, but without luck. Fear pumped his heart as his body mechanically executed the grim task his mind set.

Panting at the top of one ridge, Kirk checked the tricorder. Spock would be coming out of it any minute. He shuddered to think of Tanya, such a fragile doll of a woman, confronting a berserk Vulcan almost twice her size.

The same thought was crossing Christine's mind as Spock tossed feverishly on the damp, earthen floor. For the first time in her life, she was scared to death of the Vulcan. What would happen if he woke before the others got back?

In his peculiar way, he was the most gentle man she'd ever met. The tragedy of his very existence melted her heart -- all the more because he never allowed it to show. She still wanted to be his. She had to admit that to herself. Yet he'd chosen another. And even though she felt terribly, possessively jealous, still she prayed that Tanya would give him the happiness he so deserved. Who was to say his choice wasn't the wisest?

In all honesty, she asked herself, if she'd been chosen, could she face him when he was...like this? She didn't know. And she was sure her tempestuous, contradictory emotions destroyed her attractiveness for him. She'd known it for years. She told herself sternly that she must learn that lesson and learn it well. Now.

But she still wanted him. She called it "love," because she knew no other name for such tender desire. And yet his life now was tied to another. Tears started to her eyes.

This would never do. A nurse must not become so personally involved with a patient. She sniffed, knuckled her eyes, and ducked out into the merciless sun.

After a quick glance all around, she scrambled up the slope and peered in the direction of the tower. Would they never come!

Spock groaned. It was the first sound he'd made since the doctor had injected the sedative. And the demanding urgency in that simple, unarticulated noise sent a shiver down her spine.

She squinted hard against the sun. Where was that tower? Hadn't it been...it was gone! She stood up to get a better look.

The hills danced with heat-shimmer, and her eyes streamed from the painful brilliance, but she thought she could make out several moving figures. Heart thumping, she made her way back to the refuge to prepare rations, water, and skin salve.

Then she tried to raise the ship on the communicator.

No luck.

Another dreadful groan from the Vulcan.

She went outside with the communicator, keeping one eye on her patient and one on the top of the ridge above her head. There was absolutely nothing she could do except keep trying to raise the Enterprise. If the captain were moving, he wouldn't have breath to chat with her -- and nothing could make him come faster, of that she was certain.

The hillside was in shadow now that the sun had passed zenith, and she bore the heat with steadfast determination. It seemed like the longest -- and most helpless -- vigil she'd ever kept. The groans came more and more frequently. She'd removed all the rocks from his vicinity so he couldn't hurt himself as he thrashed about. But he'd rolled in the dirt so much he'd become covered with damp soil. All she could do was listen and keep out of the way.

Eventually, she heard a rock-rolling scramble up the far side of her hill, and she dodged into the cave-mouth, under the protecting umbrella of Spock's sensor-nullifying device. At least, it was supposed to confound the directional fixes of the natives' -- whatever-they-used.

The purposeful, frantic scramble came down the near side of the hill above the cave and dislodged several rocks which careened past the entrance, followed by a mud-caked apparition in Starfleet red.

The body sprawled headlong in the soft, dry sand and lay prone for a brief instant before rising on bare! feet. Black hair, whitened with dust, prominent nose, flared nostrils, mouth open in a snarling pant, cracked lips, red blood oozing into the

sweat-caked dirt: it was Tanya Minos...but a frightening visage, hardly the same crisply pert girl who was always so patiently willing to teach and so burningly curious to learn.

Stunned, Christine didn't know what to do. Where was the captain? What had happened out there?

Another agonized groan rent the air, and the feverishly tossing Vulcan rolled to his knees, panting wildly. His hair stood out straight from his head in a spikey crown, and he was totally covered with black, gray, and ochre dirt.

With a stomach knotting thrill of fear, Christine realized she stood between the two. Tensely, she backed off and sidled around to stand outside the cave and behind Tanya. There she froze, transfixed by the tightly leashed ferocity of the confrontation.

Spock crouched within the moist, dark cave; Tanya faced him on the dry, shadowed sand, and it seemed as if an elastic cord binding them together was contracting, drawing them inexorably into each other's arms. Slowly, with tiny steps, they seemed to float toward each other, almost afraid of the inevitable contact.

Suddenly Christine felt the captain's arm around her waist, and she collapsed gratefully against his solid strength. Out of the corner of her eye she saw Scotty and the doctor slide to a halt just behind Kirk. But she couldn't take her eyes off the vignette enacted before her.

As Spock straightened, Tanya glided into the tunnel, walking smoothly, unmindful of her feet. Strangely enough, Christine noted, those bare feet weren't bleeding -- only dirty. The blood had come from scratches on hands, face, and legs.

As the couple approached each other, they traded low, murmuring sentences that didn't carry to the humans through the thin air. Finally, the Vulcans raised both hands, fingers separated in the Vulcan way, and joined in a delicate contact, palm to palm, finger to finger, eyes locked in silent communion.

The captain pulled out his communicator. "Enterprise, Kirk here."

"Chen here. Captain?"

"I'll explain later, Lieutenant. Get a fix on this communicator, wide-scan, six to beam up. Energize, then take the ship out of orbit, course one one seven mark zero, warp factor six."

"Aye, sir. One one seven mark zero, warp six."

Presently the forest-desert vanished in a sparkling whirl, while Kirk was laying odds with himself that Spock's first words when he returned to duty would be, "Captain, striking a fellow officer is a court-martial offense."

Somehow, he didn't think Scotty would remember the incident. Most likely it was all a mirage.

The familiar soft-blue walls of the transporter room coalesced around him.

Suddenly bright orange gelatin exploded behind his eyes, and his right arm went numb with searing cold that oozed up to his shoulder and down his spinal column and sent him pitching forward into blackness.

Shocked by the sudden glare of the disintegrating glowstones, Spock turned to see Scotty, McCoy, and the captain collapse.

Distantly, he knew what had happened. The artificial stresses he'd constructed at the gravity-field nexus had collapsed under the influence of the transporter beam; the tangential shear planes that intersected the adjacent living beings had disorganized their nervous systems.

All of this he knew, but it didn't seem important. It was so difficult to focus his mind on such irrelevant trivia.

As his hands once again sought T'Aniyeh's, he heard his voice giving instructions to Nurse Chapel for immediate treatment of the three victims. But afterwards he had no memory of what he'd said.

EPILOG

"Captain's log, Supplemental. Stardate seven mark twenty-seven fifty-nine point nine. Mr. Spock assures me that there will be no further after-effects of the disintegration of the glowstones that nearly killed Dr. McCoy, Mr. Scott, and myself, provided we do not encounter other phenomena of that order for several years. I recommend First Officer Spock for a citation for dedication above and beyond the call of duty for his performance throughout this entire action.

"The Enterprise is now on course for the Dark Star cited above as 'anomalous.' First Officer Spock has the con."

T H E P A S T E L T E R R O R
 (an outline for a STAR TREK plot)
 ((reprinted from Apa-L))
 by Larry Niven

((I dreamed this up years ago, during STAR TREK's second or third season. I never tried to sell it, for reasons which will probably become clear as you read on.

((The show would take at least two hours. Possibly three.))

T E A S E R

The Enterprise is sent to investigate a Cepheid variable star. Scene opens aboard the Enterprise, in one of the auxiliary rooms, with some odd-looking equipment sitting where people will have to squeeze around it. (i.e., it's new.) Part of the equipment is a big screen showing a star, close up, in (say) green light. Photosphere is showing rapid activity.

Voice of Kirk in the background, recording for the log. "A mission such as this one should have been undertaken long ago. Cepheids were probably ignored because of their obvious uselessness for human colonization... Instruments seem to show a form of life within the photosphere. Our best guess is that it thrives on neutrino emissions, that its activity interferes with normal stellar activity, that the star therefore suffers periods of quiet. The -- beast -- goes through a period analogous to sleep or hibernation until the star can build up again.

"The star is passing through its peak activity now. In a few minutes we should see some response on the part of the beast. The beast is a plasmoid life form, by the way, formed of highly ionized gas, easily visible to a magnascreen.

"Something's happening..."

On the screen, something is flowing out from the star in pastel colors. Kirk says, "It didn't do that on the last cycle. The star may have a double period, not obvious except from this close...no, I'm wrong. It's coming for us, coming for the drive. Kirk signing off." Kirk calls, "Bridge! Bridge! Get us out of here fast!" On the screen, the pastel terror is getting bigger and bigger. It envelopes the screen entirely as we break to

C O M M E R C I A L

So far, so good. From here on the plot runs as follows:

I

The Enterprise is entirely surrounded by the plasma.

The drive slows 'way down. Matter-antimatter fuel is being consumed, but the energy isn't getting to the motors. Kirk was wrong about the Beast. It eats neutrinos and every other form of electromagnetic force.

Aboard the Enterprise, everything is in twilight.

Detectors are working fine, except that everything is dark. The Beast is invisible except to the right detectors. The sky is clear, but the stars are dim. Light has to get through the Beast.

The Enterprise cannot get up to Warp 1. At top acceleration, the Beast still surrounds the Enterprise like a halo.

They can't go home. And wouldn't if they could! The Beast might take over a star belonging to some populated world!

II

Mr. Spock's suggestion is obviously the only one that can work. It runs as follows:

1) The Beast can absorb anything put out by the Warp engines. But it could not interfere with the impulse drive, as it is a reaction motor. (Obviously it is, as it goes through the center of mass of the Enterprise.)

2) The impulse drive won't take the Enterprise over light speed. However, there is a planet in the system. Not habitable, exactly, but it is a planet.

3) The Enterprise is designed to come apart. (Obviously. The primary hull is aerodynamically designed, where the rest of the Enterprise isn't. The impulse drive goes through the center of mass of the Enterprise and of the primary hull alone.)

4) So. Take the Enterprise apart. Occupy the primary hull, send the rest of the ship off toward interstellar space, with the matter-antimatter tanks set to go dead. When whatever is keeping the antimatter from touching the tank walls stops, the Enterprise will explode. At best, the Beast will be destroyed. If not, it will be stranded in interstellar space and must go into hibernation.

III

It's the only thing left to try, by now.

Kirk refuses. "You won't destroy my ship!"

Duty above all else.
Spock uses the nerve pinch,
puts Kirk under the care of
Bones, and takes over the ship
according to the articles on
incompetency of the captain.

IV

Kirk comes out of it. He
gets to a screen in time to
watch the secondary-hull-plus-
fuel-tanks receding at a very
great distance. They are
already too far to be caught.
Kirk is working out a course
to catch them anyway, when the
whole thing goes up in
blue-white light.

Spock's own screen shows
the pastel colors of the Beast,
spreading and disintegrating
and finally vanishing.

Kirk tries to beat him up.
Spock takes it with patience,
until the doctor can put Kirk
out again.

V

Bones' verdict is: the captain is fit to command what's left
of the Enterprise. He may lose his mind if he's not restored to
command. He was too tied up with the Enterprise; he must be
given a chance to save at least what's left.

So the captain is in command as they approach Cepheii One.
But he and Spock aren't speaking unless necessary. And Kirk
isn't too happy with Bones either.

VI

Cepheii One is a moonless world, Earth size, with an atmos-
phere. That atmosphere is poisonous, but it is enough to shield
an explorer from the variable sunlight and radiation.

The Enterprise is likely to be there for some time. A
planet is a big place. But the primary hull alone could not
sustain life forever. There is force dome equipment, etc.



The main reason for going down is that the Beast took too much energy from the batteries. They need a power source. They may have to go so far as to build a dam.

VII

Details of moving men and equipment down to surface. In conversation it is made clear that certain things cannot be moved down without someone takes them apart first. There's no guarantee that any of it could be put back together, or put back together right. And there's one block of equipment that can't be teleported down nohow.

Meaning the teleport system.

But they get everyone down and a force dome set up. In a colony near a fork of a river. The most immediately valuable material is rock, which can be chemically disassembled into air and water.

Scenes of the personnel appreciating the increase in room, after too long aboard the cramped primary hull.

VIII

Spock and Kirk are the only ones left aboard the stripped primary hull.

"Fine," says Spock. "Now, there's equipment here that can't be teleported down. You teleport down, I'll stay here and try to affect a re-entry."

Kirk: "But no one has tried a re-entry in a detached primary hull. The gyros may not be able to maintain the correct attitude. The hull could melt through. There's a couple of holes that were never fully repaired after the battle with -- "

"Yes, Captain, but we need certain equipment aboard. You teleport down, I'll stay here and probably get killed."

Kirk: "Just a minute. Have you ever wondered why your father married your human mother?"

Spock: "He said it seemed logical at the time."

Kirk: "I worked it out long ago. It couldn't have been sex. Aside from the fact that Vulcans don't think that way, your mother couldn't have been very sexy to a Vulcan."

Spock: "I suppose not."

Kirk: "It must have been an experiment in genetics."

Spock: "Of course, I should have thought of that myself. It's entirely logical."

Kirk: "But why? Your father couldn't have been trying to improve the Vulcanian species. The Vulcanians are perfect already, at least in their own view."

Spock: "Naturally."

Kirk: "Your father must have been trying to improve my race, the human race."

Spock: "Now that you mention it, that makes sense. The human race is powerful, and is gaining power. You may well end by controlling the galaxy from edge to edge. My father is doing a sensible thing in trying to improve your intelligence."

Kirk: "But don't you see the point? He produced you. Your job is to seduce as many human women as possible. And you've barely started!"

Spock: "You're right. I'll have to go down."

Kirk: "Right! Let's go! The hull is already in a re-entry orbit, and it's been heating up while we've been talking. Let's get out of here! We'll have to hope it comes down safely without guidance."

Spock: "No, no, Captain. There is too much needed equipment aboard. I will teleport down. You stay here and guide it down and probably get killed."

IX

Spock teleports down. And watches, with the rest, waiting to see if the primary hull burns up in the atmosphere.

The remains of the Enterprise come over the horizon like an orange-hot flying saucer, low and huge.

"He's not decelerating," says Spock. "He should be using the impulse drive."

"It must be burned out," says -- whoever you please.

The hull lands/crashes like a flat stone skipping across water. It comes to a stop far beyond the force dome. Spock runs the distance carrying two pressure suits. He tears his way into the badly bent hulk. Can't find Kirk anywhere. Goes back to the force dome, finds that Kirk is already there, having used the teleport system to get there about three seconds after Spock started his dramatic run.

X

Details of setting up a viable colony. Dangers are optional. It might be fun to watch the Enterprise crew building Hoover Dam with a handful of portable phasers and half an hour of hard work.

The final ten minutes is something STAR TREK never did, and should have. It was an obvious enough gag:

XI

Chekov is out exploring. The planet is barren, lifeless. Chekov may be looking for anything we like, but probably ore of one kind or another. The Enterprise still has signalling equipment, but it's all sublight, which means the stranded crew may be here for decades.

Chekov uses his communicator. "I think I've found some lead ore. Let's see if there's more." He's going over a peak of rock.

He tops the rise -- and finds himself facing something in a transparent pressure suit. It's humanoid to the point of having two arms, legs, eyes, nostrils. Other than that it looks like a dragon. It's twenty feet tall, with teeth the size of so many switchblade knives. Chekov stares, frozen --

COMMERCIALS

Cut back from commercials. Chekov stares, frozen -- then raises his communicator. "Captain," he says, "We're saved. I've met a Sirian."

XII

Final scene shows Sirian and Kirk and some crew members sharing coffee.

Kirk: "How the hell did you get here?"

Sirian: "We own the planet. We've been mining it for radioactives for a century or so. You're lucky I ran across you, it's a big planet."

Kirk: "Right."

All the humans are on very tall chairs so that their eyes will be level with the cross-legged Sirian's. It becomes clear in conversation that humans and Sirians have had friendly relations for about a hundred years.

END

See why I never tried to sell it? The special effects would be murder. Further, the script involves destroying the Enterprise a piece at a time, and allowing Spock to betray Kirk twice, for the most logical of reasons.

from Dorothy C. Fontana (June 22, 1972)

Having promised to keep everyone informed as to progress on various Gene Roddenberry projects, here is the newest report:

Regarding STAR TREK, Paramount still has not committed it self to any answer on renewal of the show. But they continue to reveal interest in "off the record" meetings. Our friends at the studio tell us that they are enormously impressed by the quantity (and quality) of fan mail they continue to receive. The possibility seems to be slowly developing of a STAR TREK



feature movie for theatrical release, aimed at becoming the NEW STAR TREK television pilot. We know for certain their researchers are attempting to estimate the number of fans who could be counted on to buy an admission ticket to such a movie.

On the network front, NBC still expresses great interest in doing STAR TREK in some form. Both NBC and Paramount continue to receive a great deal of mail and have had to assign secretaries to the sole job of answering it. Nor has the amount of STAR TREK mail gone unnoticed by the network and studio executives, and it is bound to have an effect on future decisions.

While Gene is as deeply concerned about STAR TREK and its future as any fan, he also has had to be practical and move ahead to some new projects. He has recently signed a nonexclusive contract with Warner Brothers, which means he is free to pursue outside commitments (such as STAR TREK, should it be renewed) while developing television projects for Warners. Although still in the creative development stage on these new shows, he has already sold an sf series format to Universal Studios and closed deals with CBS on two Warners series projects (one science fiction and one supernatural fiction). Current plans point toward these projects being done first as movies-for-TV which will serve as pilots for the new series. Also in the formulation stage is a joint project by Samuel A. Peeples (writer of the second STAR TREK pilot) and Gene Roddenberry, a TV series aiming to show how police work should and can be done ten years from now. (For one thing, eliminating guns, clubs, and military-type uniforms in favor of using science, advanced technology, psychology in a whole new concept of serving and protecting society with high professional and ethical standards.)

In conclusion, to our knowledge, although there have been no decisions made on STAR TREK, we are optimistic that continuing fan interest will ultimately force a favorable decision. In the meantime, there are some very interesting new projects in work which we will spare no effort to make as exciting as STAR TREK and which we hope you will enjoy too.

In addition to pursuing my own writing career with scripts for GHOST STORY, ASSIGNMENT VIENNA and THE DELPHI BUREAU (new fall series), I will continue as Gene's administrative assistant and will keep you posted on further developments.

from Pat Zotti, 470 E. McNab Rd. #2, Pompano Beach Florida 33060

Will you announce my new address (and address of Voyages)?
Re: George Senda's letter on McCoy -- leaving out all the little innuendos we might dig up in either the aired Treks or in (horrors!) the Blish books, and considering the character of the

man and his background, I wouldn't be at all surprised to see him leave the Fleet someday -- perhaps even retire early -- and pursue a quiet practice somewhere. Hopefully, happily. He's the kind of man who could settle down quite easily, given the proper stimulus. (And I just happen to know a nice, Lythian girl who --)

from Kathryn M. Drennan, 2805 NE 26th Avenue Portland Oregon 97212

As far as I can see no mention has been made in your zine concerning the death of Steve Ihnat. He was a fine actor, and surely his great performance as Garth in "Whom Gods Destroy" merits him some mention.

I was very interested by the conclusion set forth in "Spock's Nemesis" that Kirk is something of a telepath. How many other people have reached the same conclusion? I am interested in this because when I got T-N #16 I was right in the middle of writing a short story where I use this conclusion as a major factor.

In regard to Mr. Blish, I feel he takes a somewhat undeserved beating from fans. It is true that he sometimes makes mistakes (I found several cases in Star Trek #7 where characters OPEN AND SLAM doors on the Enterprise; neat trick, huh?) but very often he just does what every other Star Trek fan does who likes to write, that being making editorial comments. He likes to add in parts that smooth over minor discrepancies, as he sees them, that are sometimes right on target, sometimes way off base, but never as unreliable as, say, our dear friends at Gold Key Comics. O.K.?

((Well, no, not ok. The Gold Key comics at least have the excuses that they must work out original plots and must remain simple enough for children to read. Blish's additions to the scripts he is supposed to be adapting may be prompted by a Baker-Street-Irregular-type desire to explain away discrepancies, but the explanations rarely seem to me to work. For example, he makes an addition to the opening of "The Cloud "inders" in #6: "It was a mission whose emergency nature was known to the High Advisor of Ardana. Yet his greeting to the Enterprise had contained no reference to the Zenite mines. Instead, his welcome specified Stratos as the reception site....[Kirk said] 'Tell the High Advisor we request that the official welcoming courtesies be dispensed with. We are beaming down directly to the mines'." The passage is evidently meant to explain why Plasus let Kirk and Spock beam into Troglyte territory if he knew there was going to be trouble. However, as there is no evidence that he knew there would be trouble there (the "Disruptors" had, after all, been striking all over the planet, including Stratos), the entire explanation is unnecessary. And I can't see any reason -- except contempt for the readers -- to make the adaptation of "Mark of Gideon" even hokier than the script was by adding a medal-awarding sequence at the end reminiscent of the Cowardly Lion's medal for bravery in the movie of The Wizard of Oz.)

from Louis Zocchi, 388 Montana Victorville California 92392

I have invented a "Star Trek" game and have made up a booklet explaining it and providing playing pieces. The booklet, "The Star Trek Battle Manual" costs \$3.00. It provides simulated conflict between the Enterprise and Klingon and Romulan ships. Rules cover photon torpedoes, phasers, deflector shields, warp drives, life support systems, sensors, impulse engines, etc. 29 pages.

from Rosalie Billman, 1235 Mandalay Pt Sarasota Florida 33581

Does the T stand for Trek?

((No, "T-Negative" is a rare Vulcan blood-type, which both Spock and Sarek have. The quickest reference to such information is Dorothy Jones Heydt's "Star Trek" Concordance, available for \$5 from Bjo Trimble (who edited it), 420 Westminster Los Angeles California 90020. It only covers the first two seasons, but a supplement is being prepared which will cover the third season. Incidentally, Bjo and her husband John are chairing a Fantasy Film Fans International SF & Fantasy Film Convention at the Ambassador Hotel in LA, November 24-26, 1972. Memberships are \$8 until Sept 5, \$10 until Nov. 23, and \$15 at the door. Checks payable to Richard M. Sneary, PO Box 74866 LA 90004. "Film" includes television, and there will be a good deal of trek material // While I'm mentioning cons, I should add the Detroit Triple Fan Fair, for ST, sf and comics, I think, is the third element of the triad. At the Detroit Hilton & Towers, Oct 19-22, 1972. Supporting memberships, \$1.50. Attending memberships, \$3 until August 31, \$4 thereafter. Detroit Triple Fan Fair, Dept. ST, 14845 Anne, Allen Park MI 48101. Then there's the International Star Trek Convention (Star Con II), February 16-19, 1973, at the Commodore Hotel in New York City. Registrations are \$2.50 non-attending; attending memberships, \$2.50 until November 1, 1972, \$3.50 until February 5, 1973, and \$5 thereafter. International Star Trek Convention, Registration, PO Box 95, Old Chelsea Station, NY NY 10011.))

from Jeanne E. Hausen, chairman Strek Welcomittee, 128 West Kanawha Avenue Columbus Ohio 43214

The Star Trek Welcomittee is a national organization set up as an information center and contact point for new fans, and to relieve the individual clubs and fanzines of the work of answering questions about "Star Trek" and Star Trek fandom. We will be in full operation by August 1, 1972.

from Burt Libe, PO Box 1196, Los Altos California 94022

I am eager to obtain copies of T Negative 1, 7, 10. Please write if you have a copy of any of these to sell.

..upon condition that forthwith
They yield the captains of their Enterprise
-- Thomas Norton & Thomas Sackville "Gorboduc", V.i.80 81.

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#9, January 1971

covers: Commander James T. Kirk of the I.S.S. Enterprise uses the Tantalus field to assassinate Captain Christopher Pike by Anthony Tollin, and "Look what followed me home" by Mary Ann Cappa.

Star Trek Question & Answer Panel, Funcon '68.

The Rainbird: Dorothy Jones & Astrid Anderson

It Seemed the Logical Thing: Ruth Berman

Old-time Reviews: "Star Trek" 2nd season; addenda: Shatner, Kelley, Koenig.

T-Negative 1-8 index

illos: Gail Barton, Anthony Tollin, Barbi Marczak, Al Kuhfeld.

linos: Nan Braude

#10, April 1971

covers: Garth & Marta by Kathy Bushman

Onset: Dorothy Jones

Intersection Point: Juanita Coulson

Spock's Mission: Jacqueline Lichtenberg

T-Waves: Regina Marvinny, Bruce Robbins, Amanda Bankier

illos: Barbi Marczak, Gail Barton, MKS, Anthony Tollin, Wendy Fletcher

lino: Nan Braude

#11, July 1971

covers: McCoy by Jackie Franke & Spock by Tim Courtney

In Re: Star-Dates: Ruth Berman

And Who Will Guide the Blind: Judy Burns

Marginal Existence: Connie Reich Faddis

The Yeoman's Captain: Ruth Berman

Old-Time Reviews: ST 3rd season

T-Waves: Jacqueline Lichtenberg, L.E. Wallace, Jr.

perVerse: Cecily Horton & Ruth Berman

illos: Anthony Tollin, Barbi Marczak, Bernie Zuber, Jackie Franke, Rosalind Oberdieck, Clarica Scott

#12, October 1971

covers: by Connie Reich Faddis/Gary Mitchell by Alan Andres

A Dealer in Kevs: Ruth Berman

Spock's Argument Part I: Jacqueline Lichtenberg

Prologues: Pat Kienly

Review addenda: Shatner, Nimoy, Takei, Barrett, Lenard, Koenig

T-Waves: Bruce Wardoci, Regina Marvinny, Amanda Bankier, James Mule, Jr., Anna Mary Hall, Ellyse Pines, Amelia Rodgers, Sue Clejan

Old-time Reviews: "The Lieutenant"

illos: Rosalind Oberdieck, Connie Reich Faddis, D. Carol Roberts, Rae Ladore, Anthony Tollin, David Lomazoff, Greg Jein, Karen Flanery

#13, December 1971

covers: by Connie Reich Faddis & Greg Jein, logo by C. Lee Healy

Cousinage: Ruth Berman

Sentience is Where You Find It: Melisa Michaels

Spock's Argument Part II: Jacqueline Lichtenberg

T-Waves: Jacqueline Lichtenberg, R.V. Van Treuren, Danielle Dabbs, Luanna Hofschulte

illos: Rosalind Oberdieck, D. Carol Roberts, Anthony Tollin, Tim Courtney, Greg Jein

lino: Nan Braude

#14, March 1972

covers: "Picnic" by Lois Spooner & Anthony Tollin/old-age photos

Notes on Leonard McCoy: Ruth Berman

Picnic: Anna Mary Hall

Old-time Reviews: Gene Roddenberry; addenda Shatner, Nimoy, Lenard, Kelley, Koenig, Takei.

T-Waves: Dorothy Fontana, George Senda

illos: Rae Ladore, Barbi Marczak, C. Lee Healy, Al Kuhfeld, Rosalind Oberdieck, Gail Barton

#15, May 1972

covers: wedding portrait by Anthony Tollin/Uhura photos

Star Trek Convention: Devra Langsam

Brother's Keeper: Ruth Berman

Sonnet from the Vulcan, Omicron Ceti

Three: Shirley Meech

The Disaffirmed: Ruth Berman

Star Trek Kriss Kross: Agnes Nissen

Star Trek Renewal?

T-Waves: Bruce Robbins, Pat Zotti,
Fred Patten, Weems, Devra Langsam,
Shirley Maiewski, Steve O'Neil,
Ginie Reynolds

review addendum: Nimoy

illos: Joyce Yasner, Greg Jein, Jackie
Franke, Rae Ladore, Rosalind Ober-
dieck

#16, July 1972

covers: Klingon captain from "Elaan"

by Anthony Tollin/ Sulu photos

Son of Star Date: Ruth Berman

Recent articles of interest

Spock's Nemesis Part I: Jacqueline
Lichtenberg

Rorrim, Rorrim: Ruth Berman

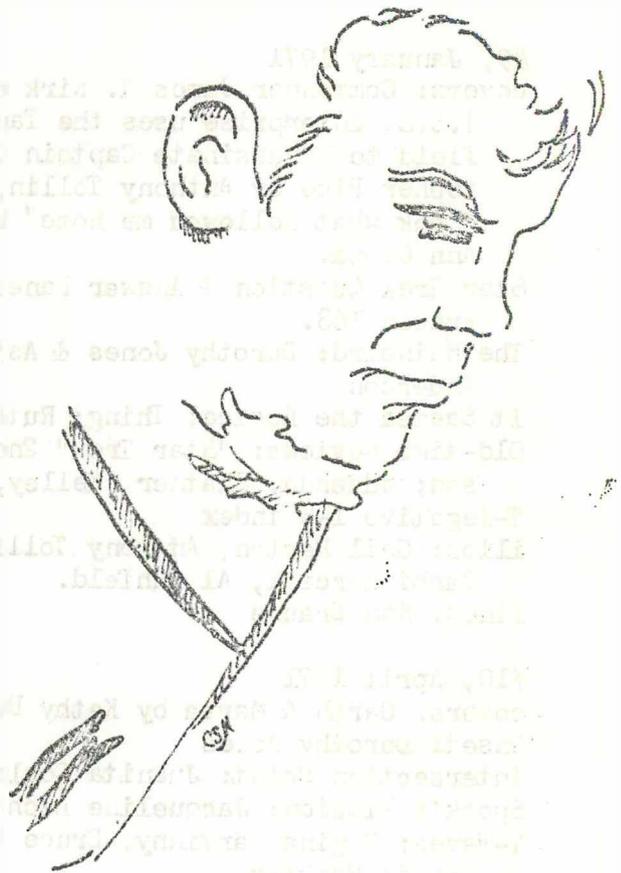
Old Time Article, "A Trek Through
Deepest Space" by John Stanley

Trekzine Reviews (Masiform-D): Carol
Pruitt Ing

reviews: Shatner, Nimoy, Koenig

T-Waves: Deborah Goldstein, Shirley
Maiewski, George Senda, Stephen
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Kuhfeld



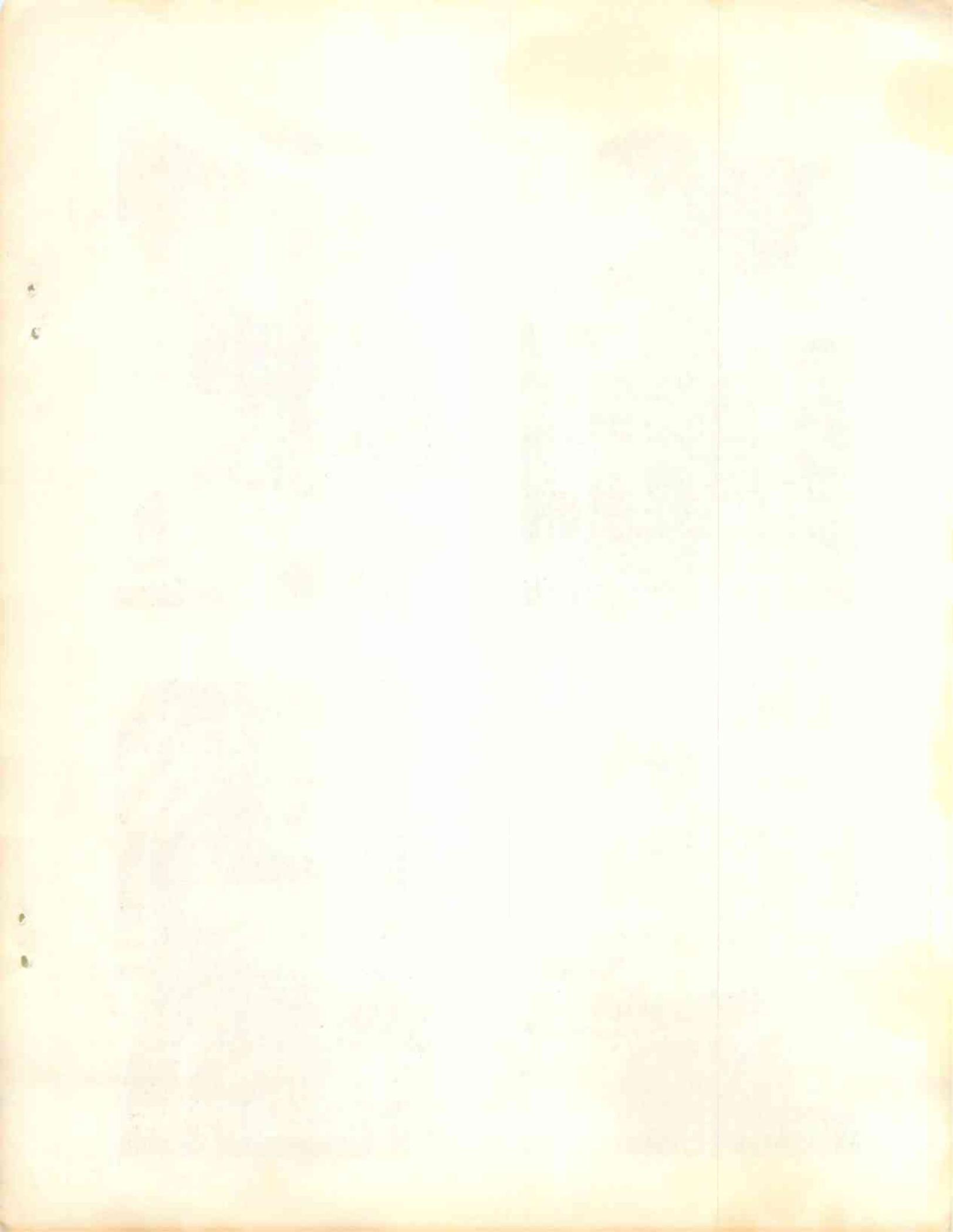
More T-Waves

FROM D. Carol Roberts, PO Box 9097, Phoenix Arizona 85068

L'Shaya Thirteen announces (for new subscribers only) a year's worth of L'Shaya Thirteen for \$11.00. Includes 2 Impulse (trekzine), 6 Friends of Mind (reviews of straight sf and fiction), 1 Star Trek Cookbook, and one copy of Ni-variations (a collection of Vulcanur poetry). Order from Liz Danforth, PO Box 9097, Phoenix Arizona 85068.

FROM Jacqueline Lichtenberg, 9 Maple Terrace, Monsey New York 10952

"Spock's Nemesis; Kraith IV," as the sub-title indicates, is part of a very long series of stories and articles. Many of the individual items are baffling out of context. The series is appearing in many different zines, and is being written by several others besides myself; a complete bibliography of the Kraith Series is now available in Voyages 2 from Pat Zotti, 470 E. McNab Rd #2, Pompano Beach FL 33060. Voyages 2 also contains some material which I consider indispensable to the understanding of McCoy's actions in Kraith IV. It is presented in the form of a view of Tanya through the eyes of Pat Zotti's character, Amy.



Scott

