

Author! Author!

RAYMOND Z. GALLUN Science fiction has changed considerably since 1929, when Raymond Z. Gallun's first story appeared. The sugar-coated scientific lectures, the flat chronologies of future catastrophies, the mad scientists and grisly, monstrous invaders are things of the past, relegated to the comics when they appear at all. Stories are now about people; but Mr. Gallun's strong point has always been his characters (human or non-human) set in unworldly situations, so he has not had to change his ways too much in order to compete with improved standards. This is attested to by the number of his stories, old and new, which have been included in anthologies as representative of first-class science fiction.

SCIENCE FICTION

STORIES

Contents

<i>Sentiment, Inc.</i>	POUL ANDERSON 4
<i>The Way of Decision</i>	M. C. PEASE 30
<i>Comet's Burial</i>	RAYMOND Z. GALLUN 54
<i>The Slizzers</i>	JEROME BIXBY 72
<i>Ask a Foolish Question</i>	ROBERT SHECKLEY 81
<i>Riya's Foundling</i>	ALGIS BUDRYS 90
<i>Nine Men in Time</i>	NOEL LOOMIS 99
<i>By Earthlight</i>	BRYCE WALTON 114
<i>The Natives</i>	KATHERINE MACLEAN 126
<i>The Eyes Have It</i>	PHILIP K. DICK 128



A man may be a scoundrel, a crook, a high-phased confidence man, and still work toward a great dream which will be worth far more than the momentary damage his swindling cost.

Comet's Burial

by RAYMOND Z. GALLUN

OUTSIDE Tycho Station on the Moon, Jess Brinker showed Arne Copeland the odd footprints made in the dust by explorers from Mars, fifty million years ago. A man-made cover of clear plastic now kept them from being trampled.

"Who hasn't heard about such prints?" Copeland growled laconically. "There's no air or weather here to rub them out — even in eternity. Thanks for showing a fresh-arrived greenhorn around . . ."

Copeland was nineteen, tough, willing to learn, but wary. His wide mouth was usually sullen, his grey eyes a little narrowed in a face that didn't have to be so grim. Back in Iowa he had a girl. Frances. But love had to wait, for he needed the Moon the way Peary had once needed the North Pole.

Earth needed it, too — for minerals; as an easier jump-off point to the planets because of its weak gravity; as a place for astronomical observatories, unhampered by the murk of an atmosphere; as sites for labs experimenting in forces too dangerous to be conducted on a heavily-populated world, and for a dozen other purposes.

Young Copeland was ready for blood, sweat, and tears in his impulse to help conquer the lunar wastes. He sized up big, swaggering Jess Brinker, and admitted to himself that this man, who was at least ten years his senior, could easily be a phony, stalking suckers. Yet, Copeland reserved judgment. Like any tenderfoot anywhere, he needed an experienced man to show him the ropes.

He already knew the Moon intimately from books: A hell of silence, some of it beautiful: Huge ringwalls. Blazing sunlight, inky shadow. Grey plains, black sky. Blazing stars, with the great blurry bluish globe of Earth among them. You could yearn to be on the Moon, but you could go bats and die there, too — or turn sour, because the place was too rough for your guts.

Afield, you wore a spacesuit, and conversed by helmet radiophone. Otherwise you lived in rooms and holes dug underground, and sealed up. The scant water you dared use was roasted out of gypsum rock. The oxygen you breathed was extracted from lunar oxides by a chemical process. Then air-rejuvenator apparatus reasparated it from the carbon-dioxide you exhaled, so that you could use it over and over.

Copeland had read the tales: With that kind of frugality as the price of survival, lunar prospectors could turn selfish to the point of queer-ness. Afraid somebody might follow them to their mineral claims, they'd take more pains to leave as little spoor as possible than a fox being tracked by dogs.

"Speaking of how footprints last around here," Copeland remarked for the sake of conversation, "I understand you've got to be careful — stick to high ridges, and to parts of the flat *maria* where there's no old volcanic ash or dust of thermal erosion."

"Guys who do that are misers and old women, kid," Brinker scoffed. "Hell — it sure ain't because they're modest that they're so cautious! Me — I do things right."

He lifted a foot from the dust beside the path, revealing the mark of the specially etched steel sole of his spaceboot. A name was stamped across the print: BRINKER.

"I'm proud of where I've been and where I'm going — like a true explorer," the big man said. "Get some soles like mine made for yourself, fella, and come along with me."

Copeland was intrigued. "Let me think about it a little."

DURING the next few hours he heard quite a lot.

A big, blonde nurse — one of the two women in the sealed warrens of Tycho Station, said: "Young man, I love Jess Brinker. But keep away from him or you'll wind up in the prison pits, or worse."

And Copeland heard about Tom Brinker, Jess' dad — the kind of swindler always found in rough new territory, anywhere. He had promoted the idea of a real city on Lunar. Yeah — one with trees and flowers. What sentimental bait that was for home-starved, desolation-sick wanderers! No wonder somebody had murdered him recently.

By common opinion, twenty-odd years was the only difference between Jess and his father. "Stay clear," was the warning; the name of Brinker was mud and poison.

Arne Copeland was a cagey youngster; nobody influenced him when he made up his mind. He was no cow-eyed hero-worshipper; yet, on

his own, he kind of liked the large, battered, egotist. Copeland knew that he was an egotist himself. He also knew that merely to be on the sketchily-explored Moon was to take chances.

So he said "Okay," to Brinker, and got some metal boot-soles made, with his name etched into them in reverse, as in a rubber stamp.

Under packs that no coolie could ever have lifted against Earth gravity, they left Tycho Station and moved toward the fringe of that lunar hemisphere which is never seen from Terra — though it is no different from the visible half in general character.

Wherever their feet found a medium that would take an impression, they left their trademark behind them. Copeland could brush a name out with a glove; otherwise those names were about as permanent as if carved from granite, for there was no wind to blow the dust, and no rain to wash it away. Passing tractor-caravans would never blot out all of the footprints: Not in ages of time.

"At least we got us a monument, Jess," Copeland said once, feeling somewhat thrilled. "That's what guys out exploring and prospecting need. A legend. A reputation."

Jess Brinker's eyes narrowed, making him look sinister. "Yeah, Cope," he drawled. "But in my case it's a *counter*-reputation, with a little of Robin Hood thrown in, to help blow the stink of my Old Man off me. I want some friends and backing, so I can do what Dad really wanted to do — though he was as much of a rogue as a saint. You listening, Cope?"

Copeland kept his face stony. "Tell me what you want to, and then stop," he said softly.

"Thanks," Brinker answered. "It doesn't matter too much that I can guess who killed Pop, and would like to square things. Yeah, a hatchet-faced ex-partner who turned pious and legal on the outside, after he got the breaks. How old is that story, I wonder? . . . It doesn't even rile me terribly, knowing that Dad wasn't all crook, knowing he *believed* his idea was good for everybody, and was trying to get funds to put it across."

Brinker sighed and went on: "The idea is the *important* thing, Cope. A place with trees and flowers, a city, maybe — an antidote for the Moon's desolation. Anyone here feels the need in his bones and nerves. But it would take more air and water than could ever be imported, or drawn from the lunar crust. You wouldn't know it on the dead surface, but two hundred miles deep in the Moon there's still molten lava,

plentiful water in the form of steam, volcanic carbon-dioxide gas — the makings of oxygen. There's nitrogen, too.

"How to reach that stuff is the question. Drills break under the pressure of depth at a tenth of the distance. Pop's idea involved Brulow's Comet, which will be coming back sunward from far space in three years. Imagine — a comet! It could be dangerous, too; nobody could ever get permission for an attempt."

Brinker paused again. Copeland and he were plodding through a jagged valley. The stars were merciless pinpoints, the silence brittle and grating.

"But there must be a way of blasting down to those life-giving raw-materials, Cope," Brinker continued. "Maybe with atomic explosive. Experiments call for funds and backing. So I save my money, and wish I had a head for making it faster. And I look for weak spots in the lunar crust with radar. And I try to get people to know I'm around, and to like me . . ."

Copeland realized that what he had just heard could be a line of malarkey meant to kid a yokel, or a bid to get him involved in something. But he found himself kind of falling for the yarn. More than ever he suspected that folks were wrong about Jess Brinker; his warning instincts were being lulled to sleep.

MONTH-LONG lunar days passed, while the two men ranged over a segment of the hidden hemisphere. They trod plains and crater-walls unsullied by human feet before; they took photographs to be sold to the Lunar Topographical Commission; they located deposits of radioactive metals, which could be registered for investigation by an assaying party, and for possible royalties. Periodically they visited scattered supply stations, and then set out once more.

Such a life had its poisons even for Brinker and Copeland, who were braced for meeting the unknown and the strange.

Living in space suits for weeks at a time; smelling their own unwashed bodies; slipping an arm out of a heavy sleeve to draw food through a little airlock in their armor's chestplate; knowing, in spite of effective insulation, that the heat of day exceeded the boiling point of water, and that the cold of the protracted night, when usually they continued their explorations with the aid of ato-lamps, hovered at the brink of absolute zero — all those things had a harsh effect on nervous-systems.

They found two human corpses. One had been crushed in a long fall, his spacesuit ripped open; he was a blackened mummy. The other

was a freckled youth, confined in his armor. Failure of its air-rejuvenator unit had caused asphyxia. What you did for guys like this was collect their credentials for shipment home.

Copeland also found a Martian — inside its transparent version of a spacesuit, for the ancient Moon had been much the same as now. The being was dead, of course. Its brain-case had been a sac; its tentacles were like a snarl of age-hardened leather thongs.

Lying near it was an even greater rarity — the remains of a different sort of monster from the planet that had been literally exploded in a war with Mars, to form the countless fragments that were the asteroids. That much of remote history was already known from the research-expeditions that had gone out to the Red Planet, and beyond.

The queer, advanced equipment of these two beings from two small, swift-cooling worlds — which had borne life early, and whose cultures had rivalled briefly for dominance of the solar system until they had wiped each other out those fifty million years ago — lay scattered near them. It was still as bright and new as yesterday, preserved by the Moon's vacuum: Cameras, weapons, instruments — rich loot, now, to be sold to labs that sought to add the technology of other minds to human knowledge.

For a year, things went well. The names, BRINKER and COPELAND, footprinted into the lunar dust, helped build the new reputation that Brinker wanted. Copeland and he were a hard-working team; they covered more ground than any other Moon explorers.

The fights that Brinker got into with other toughs at the various supply stations, and never lost, added to the legend — that old Tom's son was savage and dangerous, but with a gentler side. For instance he once carried a crazed Moon-tramp, whom Copeland was too slight to have handled for a minute, fifty miles on his back to a station. Oh, sure — the stunt could be pure ballyhoo, not charity. But Copeland knew that more and more people had begun to admire his buddy.

Brinker never found a weak spot in the lunar crust. "It's always about two hundred miles deep, Cope," he said. "Lots thicker than Earth's shell, because the Moon, being smaller, cooled more. But don't worry; nothing is impossible. Soon I'll have enough money to make minor tests. And maybe enough friends for serious support."

Yeah — maybe it was all just a brain-bubble. But Copeland had seen enough of desolation to grind the spirit of the Brinker idea into his bones — even if he didn't think it was quite practical.

"I'll throw my dough in with yours, Jess," he said.

Their named bootprints helped build their fame as explorers; but there was a flaw and an invitation here which they both must have realized — and still faced as a calculated risk.

A LUNAR day later, they were plodding through the Fenwick mountains on the far hemisphere, when streams of bullets made lava chips fly.

As they flopped prone in the dust, a scratchy voice chuckled: "Hello, Brinker. Maybe you and your pal want my bunch to escort you back to Tycho Station. We might as well have the reward. Robbery of a minerals caravan and three killings, they say. It's terrible how you scatter your tracks around . . ."

Brinker grasped Copeland's wrist to form a sound-channel, so that they could converse without using their radiophones. "That was Krell talking," he said. "Dad's old partner."

Luckily, it was not many hours to sunset. The mountain ridges, slanting up to the peaks, cast inky shadows that could hide anything. Brinker was canny; while more bullets sputtered, he led a dash back to a ridge-shadow that went clear to the range-crest. Even with bulky packs, climbing was a lot faster than on Earth, where things weigh six times as much.

So they got away, over the mountains. The black night of the far side of the Moon, where Earth never shines, hid them.

"Making boot-soles with our names on them," Brinker growled bitterly, using the radiophone at reduced range. "The crudest kind of frameup."

"Your Krell is quite a man," Copeland stated.

"He *could* have arranged all of it — sure," Brinker answered. "He knows I suspect that he finished Pop, so I'm dangerous to him. He might hate me, too, as part of my Old Man — sort of . . . Whatever it was he got sore about, originally — money or principle, no doubt . . . Besides, I don't think he wants the Moon to be a little more livable. It would encourage too many colonists to come, increase metals production, spoil prices, cheapen his claims. He's a corny man, with all the corny reasons ."

"He, and some of his guys, could have robbed and killed and left footprints like ours. But any other lugs, seeking someone else to blame for their crimes, could have done all that. If that is so, Krell has got me even *legally* — without blame to himself."

"Footprints!" Copeland snapped. "They're so obviously a frame

that it's silly; anyone could see that! Another thing — maybe Krell was kidding, scaring us by saying that we are wanted. Tell you what, Jess: In any case I won't seem as guilty as you; I'll go back alone to Tycho Station, and clear us both."

"You're an optimist, ain't you?" Brinker laughed. "Krell wasn't kidding; and in a rough place like the Moon, justice jumps to conclusions and gets mean, fast. Sure, the purpose of the footprints is obvious. But I've been fighting uphill against my Old Man's reputation for a long time. Who's gonna say I haven't backslid? What I want to accomplish is tough enough with everything in my favor."

Brinker's voice was now a sinister rumble with a quiver in it. Arne Copeland turned wary again; he had never lost entirely the deepseated notion that Brinker might cause him misfortune.

"So now what?" he demanded softly, flashing his ato-light beam against Brinker's face-window, so that he could see his expression. Copeland meant to forestall danger aggressively.

But as the darkness between them was swept aside, he also saw the muzzle of Brinker's pistol levelled at him. The bigger man's grin was lopsided. "I'd give you my neck, Cope," he rumbled. "But I'd give both our necks for you-know-what. Now, because that's all there's left, I'm gonna try it Pop's crazy way. You're gonna help. If you and I can last through a couple of years of *real* silence and solitude, it might have a chance. I got a ship hidden. Give me your gun. Easy! If you think I wouldn't shoot, you're a fool. Now I'll wire one of your wrists to mine; we've got a long march ahead."

SOME march it was! Copeland was fiercely independent. The warnings about Brinker had gone to waste; so had his own wariness. Bitterness made him savage. The harshness of the Moon still ached in his guts — he wanted the steam and gases of its interior tapped and used, yes — but by some reasonable means. Jess Brinker must be truly Moon-balmy, now. Desolation-nuts. Wild for the sight of growing things. Else how could he think seriously of using Brulow's Comet? Was it hard to guess how? Copeland knew that he and Brinker had courage, and willingness to work for a sound purpose. But to trade long effort and hardship in a proposition that courted suicide, even in its probable failure — and wide destruction if it managed to be successful — was worse than folly.

So, when these meanings became clear in his mind, he wrestled Brinker at every turn. Twice he almost won. He argued and cursed,

getting nowhere. He defied Brinker to shoot him. The big man didn't do that. But at last Brinker jabbed a hypodermic needle — part of the regulation medical kit — through the flexible rubberized fabric of the elbow-joint of Copeland's spacesuit, and into his arm.

Many hours later, and many miles farther into the mountainous country, Copeland awoke in a cavern with glassy walls, illuminated by Brinker's ato-light. Brinker stood near where he lay. He seemed just grimly good-humored.

"This is an old Martian supply depot, Cope," he offered. "I found it before I knew you, and I kept it in reserve for possible trouble, like now. I knew I could convert its contents to considerable money at any time. So it was like a bank-account, and a last resort, too. There's even a small Martian spaceship; only three others have ever been found, intact. I also cached some Earthly instruments here. You can bet I didn't leave any tracks for miles around."

Copeland's gaze caught the eerie gleam of the strange little craft. He saw the stacks of oddly-made boxes and bales. His hackles rose as he thought of a senseless plunge into unplumbed distance.

"Unwire my hands, Jess!" he coaxed again, trying to control fury. "Get wise! Damn you — you're more dangerous as an altruist than any crook could be!"

Brinker's laugh was sharp, but his eyes held real apology. "Want to help me ready and load the ship?" he said almost mildly. "No — I guess not; you aren't quite in a cooperative frame of mind, yet. I'll need you later. Sorry, but you're the only guy around, Cope."

Brinker blasted queer bulkheads out of the ship, in order to make it habitable for humans. The exit of the cavern had been masked with debris, but now he cleared it. He tossed Copeland aboard and took off into the lunar night.

THE vast journey lasted for months. Once Brinker said to his sullen, and again partially-drugged, captive: "Maybe in two years, if we're very lucky, we'll be back."

Hurting outward, they passed the orbits of Mars, the asteroids, Jupiter, and Saturn. There, with Earth-made instruments, Brinker located what he sought: Brulow's Comet.

So far from the sun, where the fluorescence-inducing radiations were thinned almost to nothing, it glowed hardly at all. And it had almost no tail; it was only a gigantic, tenuous ghost, with a core of stone and magnetic iron fragments.

Still dazed, Copeland thought about comets. Wanderers, following elongated orbits that loop tight around the sun at one end and plumb the depths of space at the other. Of all large forms moving through the void, they were the least dense. In coma and tail, they were only intensely rarefied and electrified gas. The great enigma about them was that things so deficient in mass and gravity could hold onto even that much atmosphere for long. Perhaps new gases were baked out of the meteoric core, each time a comet was close to the sun; maybe some of them even renewed their atmosphere periodically, by capturing a little of the tenuous substance of the solar corona, during their very near approaches to it.

Brulow's Comet was on the sunward swing, now, gaining speed under solar gravitation; but it still had a long ways to go. Brinker guided the ship down through its coma and toward its lazily-rotating nucleus, where thousands of fragments of iron and rock swirled around their common center of gravity.

The chunks clattered against the craft's metal hull, but did no damage at their low speed. Brinker brought the ship to rest at the center of the nucleus, where there was one solid mass of material a hundred yards in diameter.

"Well, we're here, Cope," Brinker said grimly. "We don't have to work right away — if you don't want to. We've got too much time."

Those two years looming ahead were the worst. If the Moon had been harsh, it was nothing to this eerie place. The heart of this small comet was illumined by faint, shifting phosphorescence, ranging from blue and tarnished silver to delicate if poisonous pink. Perhaps the cause was the same as that of the terrestrial aurora. The silence here was that of space; but the swirling motion of the nucleus suggested a continuous maddening rustle to Copeland.

He had to yield to Brinker's wishes. Toil might divert him some, keep him from feeling the tension of time and strangeness so much.

"Okay, Brinker," he said. "You win. Brulow's Comet is headed for a close approach to the Earth-Moon system. So you want to be spectacular, and shift it a little from its orbit — so that it will hit the Moon and maybe break its crust. Was that so hard to figure? That sounds pretty big, doesn't it? But I'll humor you. Let's see how far we get . . . Since we're here." His sarcasm was tired.

As a preliminary, they cut a cavern in the central mass of the nucleus with Martian blasters, and fitted it with a crude airlock. The

cavern would be better to live in than the interior of a ship meant for alien beings. They moved Martian apparatus and supplies into it: Air-rejuvenators, moisture-reclaimers, cylinders of oxygen and water, and containers of nourishment — all millions of years old.

Their remaining supply of Earthly food in their packs was now very short. It was weird — eating what had been preserved so long ago, on another world, for beings just barely close enough to human for their food to be edible. Gelatins, sectional fragments of vegetation, and what might have been muscle-tissue. Copeland and Brinker both gagged often. It wasn't the bland, oily taste so much, but the idea . . .

Some of it, Copeland decided, was not native Martian. It was more like terrestrial fish. And slabs of coarse meat might have been flesh of the last dinosaurs! Martians surely must have visited Earth briefly, though evidence there had long since weathered away.

WHILE the still-distant sun sent thin light into the comet, Brinker and Copeland removed the propulsion-tubes from the ship and welded them to the central chunk of the nucleus. They had a number of other spare jet-tubes. These they fastened to lesser masses.

Whenever, in the slow swirling of the nucleus, tubes pointed in the calculated proper direction at right angles to the comet's course, they were fired in long bursts. Thus, slowly, like a perfectly-balanced bank vault door moved by a finger, the mass of the comet — slight by volume, but still measuring many thousands of tons — was deflected in the opposite direction. Astrogation-instruments showed the shift. Copeland had expected such coarse deflection to be possible; still, it startled him — this was the moving of a celestial body!

"Just a little — for now, Cope," Brinker said. "We'll leave the fine aiming for later. Meanwhile we've got to pass the time, stay as well as we can, and keep our heads on straight."

Sure — straight! If Brinker hadn't turned foolish before they had come, they wouldn't be out here at all. In a month they were already thinning down from malnutrition and strain. At first, thinking coldly, Copeland was sure they'd wilt and die long before they got near the Moon.

Then, as they managed to steady themselves some by the diversions of playing cards, and studying the intricacies of Martian equipment, he began to fear once more that Brinker might succeed in his efforts — but fail terribly in result.

Many times Copeland went over the same arguments, struggling

to speak calmly, and without anger: "I wonder if you realize it, Brinker — with enough velocity one large meteor carries more energy than a fission bomb. A whole comet would affect thousands of square miles of the lunar surface, at least. Smash equipment, kill men. And if the comet happened to miss the Moon and hit Earth —"

Sometimes Brinker's expression became almost fearful, as at an enormity. But then he'd turn stubborn and grin. "There's plenty of room to avoid hitting the Earth," he'd say. "On the Moon, astronomers will warn of the shifted orbit of Brulow's Comet in plenty of time for everybody to get out of danger. Most of what we've got to worry about now, is our lives, or jail . . ."

A moment later, as like as not, they'd be slamming at each other with fists. Copeland found it hard to contain his fury for the man who had brought him such trouble, and — without intent — was so determined to extend it to many others.

Brinker kept winning the scraps. But Copeland's ten-year age-advantage meant something when it came to enduring hardship and partial-starvation over a long period. They didn't weaken equally.

This levelling of forces was one thing that Copeland waited for. Another was that when Brulow's Comet was found to be off course, a ship might be sent to investigate. He never mentioned it, certainly; but once Brinker said: "I'm ready for what you're thinking, Cope. I've got weapons."

By then they spent much of their time in torpid sleep.

Another difficulty was that it was getting harder to keep one's mind consistently on the same track. Space, tribulation, and the months, were having their blurring effect.

Often, Copeland spent many hours in wistful reverie about his girl, Frances, in Iowa. Sometimes he hated all people — on Earth, Moon, and everywhere, and didn't care what happened to them. On other occasions Brinker's basic desire to lessen the desolation of the lunar scene looked supremely good to him — as of course it always had, in principle. Then, briefly and perhaps madly, he was Brinker's pal, instead of yearning to beat him to a pulp.

SOMEHOW, twenty months crept by, and the first spaceship hove inquisitively close to Brulow's Comet. A shadow of his former self, Brinker crept out of the cavern to man his weapons. But like a famished beast seeking prey, Copeland followed him.

His victory, now, was almost easy. Then all he had to do was wait

to be picked up; the ship was coming nearer. Through the now much-brightened glow of the comet, it had ceased to be a planetlike speck reflecting sunlight, and showed its actual form.

Confusion whirled in Copeland's head; hunger gnawed in him. Yet he looked down at Brinker — poor Brinker, beaten unconscious inside his spacesuit. Brinker had tried to fight lifeless dreariness. Copeland, weak of body and fogged of mind, was now close to maudlin tears. Dreariness was the enemy — here as elsewhere. He tried to think; his stubborn nature mixed itself with splinters of reason, and seemed to make sense.

His twenty months of suffering out here had to be used — mean something — didn't it? It couldn't be just a futile blank. You had to follow a thing started through to the end, didn't you? Brinker wanted to improve the Moon, which certainly needed that. Okay — finish the job that had gone so far. Damn desolation everywhere! Fight it! Smash it! Sudden rage made Copeland's thin blood pound. Dimly he realized that he was driven by the same dreariness-disease that motivated Brinker. So what? Who cared about smashed lunar equipment, after all. And beside experience, prison would be paradise.

Copeland fired a Martian rocket-launcher, aiming behind the ship. He saw the blaze of atomic fission. Jets flaming, the craft fled.

In his phones he heard a voice that he remembered: "That you, Brinker? Trying your father's trick, eh? Idiot! You'll kill yourself, or be executed. And now you even shoot!"

Fury at Krell clinched Copeland's decision. He did not answer him. But when Brinker woke up he said savagely, without friendship or forgiveness, yet with cooperation: "We're on the same side, now. Let's aim Brulow's Comet."

Concentrating was hard, but they had their instruments and calculators. Velocity, position, and course of both comet and Moon had to be coordinated to make them arrive in the same place at the same moment. It was a problem in astrogation, but a comet was not as easily directed as a space ship. Copeland had once thought that the necessary fine guiding couldn't be done. The jet-system they had rigged in that inconveniently whirling nucleus was crude.

But one thing was in their favor; they had ample time. They could adjust their course with the jets, check with instruments, and re-adjust — again and again. Copeland found himself doing the vital part of the job; he was better at math than Brinker.

They still had plenty of Martian food left — for what it was worth

to human insides. Perhaps unified purpose and action brightened their outlook a little, helping their bodies. They could never work very long — even in the almost total absence of gravity. But — at least — their weakness wasn't increasing now.

During those last four months they drove several ships away. Earth and Moon swelled to spheres, ahead. Brulow's Comet lengthened its tail under increased solar light-pressure. Intensified radiation made its shifting colors glorious.

Brinker and Copeland lined their gigantic missile up on its target as perfectly as they could. Fifty hours before the crash was due, they smashed most of the jets. The remaining ones they tried, feebly, to refit into their ship, meaning thus to escape.

THREE Space Patrol craft showed up, and they had to man their weapons. Copeland hated to be an outlaw; but now he could not see effort brought to nothing. Brinker and he had survived so far, accomplishing much — far better results than he had expected; it made him surer that their purpose was generally sound.

More missiles were fired carefully — not to do damage, but to discourage the intruders; the latter were held at bay for another twelve hours. Copeland and Brinker left radio commands and threats unanswered, so it was hard for their opponents to get a fix on their position in the whirling nucleus.

Explosions blazed around them, but never very close. Masses of iron and stone were shattered and half vaporized, cooling subsequently to fine dust. The nucleus of Brulow's Comet expanded a bit under the battering that went on within it.

At an opportune moment, Copeland and Brinker clung to one of their jet-tubes and, gunning it very lightly, rode it from the central core-mass of the nucleus to a lesser meteor, and hid in a cleft. A dust-poll had concealed their change of position. And now, with so many other large meteors around them, they would be almost impossible to find.

They glimpsed the Patrol craft invading the heart of the comet. Men poured forth, struggling to set up jets in the hope of still deflecting this juggernaut from the Moon. But the comet was already much too close; before the setting-up was half completed it had to be abandoned. Still, the ships remained almost to the last.

Copeland wondered tensely if they'd ever go. His withered palms perspired.

"We could still yell for help — have them take us off," Brinker suggested when they had left. He spoke by sound-channel contact.

The Moon loomed huge and ugly ahead. Copeland gave it a scared glance, and then laughed grimly. "Ironic, that would be," he snapped, "No — we've got this jet to ride, and we're still at liberty."

From space, lashed to the flaming propulsion tube, they saw the crash happen. It was a terrific spectacle. Copeland's hopes now had jagged cracks of worry. The comet seemed to move slowly, its coma flattening over the Moon's spaceward hemisphere. There were blinding flashes as the chunks of its nucleus bit into the lunar crust, their energy of velocity converting largely to heat. Then dust masked the region of impact. The comet's tail collapsed over the Moon like a crumbling tower.

Copeland gulped. He saw that Brinker had gone limp — fainted. Weakness was enough to cause that; but the fact of a plan carried out had a shock in it, too.

Copeland worked the jury-rigged controls of the jet, continuing to decelerate. At spotty intervals, under the terrible thrust of reducing speed, he was unconscious, too.

THERE was no such thing as picking a landing-spot. Checking velocity soon enough, so close to the Moon, took all of the propulsion tube's power — so he just followed the comet down. Almost at a stand-still at last, balanced on a streamer of flame, he toppled into hot dust. Feebly he worked to unlash himself from the tube. Brinker, jolted back to semi-consciousness, managed to do the same.

Weakened and spent, they could not even lift themselves against the slight lunar gravity for a while.

The darkness around them was Stygian. But as more dust settled, the sky cleared, and the normal stars of the lunar night blazed out. Their attention was drawn in one direction inevitably.

Red-hot lava glowed there, in scattered areas over what was clearly an extensive expanse of territory. White vaporous plumes spurted high above the ground, and against the sides of new-formed meteor-craters, a white layer was collecting.

Copeland staggered erect. "Frost and snow!" he stammered. "From volcanic steam! The first frost and snow on the Moon in a billion years! We've done it, Brinker! Brulow's Comet really did crack the thick lunar crust . . ."

He heard Brinker's grunt of premature enthusiasm.

The Patrol picked them up hours later, wandering dazedly. They were emaciated ghosts of men — almost skeletons in armor. They gave their names, but didn't really come to their senses until the prison doctor in Tycho Station treated them, and they had slept for a long time.

"Don't worry, fellas. Relax," he said — with fury in his eyes. Other faces were grim.

At the speedy trial in Tycho Station, sharp-featured Krell was among many who flung accusations.

"In the impact-zone itself — an area a hundred miles across — mining installations and machinery of tremendous value were utterly destroyed," he said. "But lesser damage extends to a far wider circle. Thousands of claims have been buried in dust, till much of the far lunar hemisphere will have to be resurveyed. Luckily, miners and explorers were warned in time, and sought safety. But the charge of wholesale vandalism — terrible enough — does not stand alone. These men are to be remembered as accused robbers and murderers."

In rebuttal, Brinker's defiance was a little uncertain, as if under so much blame, he had lost his assurance.

"Men who know the Moon know that its barrenness is poison, and not right for people!" he growled. "I tried to change it with Brulow's Comet — when I had no success by other means. Anyway, Copeland is blameless, I forced him to help me."

Embittered, there was no warmth in Copeland for his older codefendant and jinx. Still, even without Brinker's attempt to shield him, he would have been loyal.

"During all important parts of mine and Jess Brinker's joint project," he told the court, "I was in full agreement with his purpose."

Their attorney accomplished one considerable victory before these angry people. The charge of previous murders and robbery was barred; it was admitted that footprints were easy to duplicate, and that the presence of some bearing the names of the guilty was unlikely.

Brinker got fifty years in the mine-pits, and Copeland thirty.

"You always figured I might get you in a jam, didn't you, Cope?" Brinker said. "I'll keep trying to fix that."

COPELAND found nothing to grin about, in a thirty-year sentence. It was goodbye wandering, goodbye girls, goodbye everything. He'd get out middle-aged, finished, and marked. He might as well stay another twenty with Brinker — complete a sour association with him.

Copeland had another recent jolt to brood over. A bunch of old letters from his Frances had been delivered to him. His inability to receive or answer any of them had brought the worst result. She had married another guy, and who could blame her?

Arne Copeland wanted to kill Brinker. Getting desolation-goofy, and dragging him into this mess.

But from Brinker's infuriating grin, Copeland caught a hot spark of hope, backed by reasoning.

Later, sweating in the penal mine-pits near Tycho Station, Brinker and Copeland still heard scraps of news.

Explorers moved back into the region where the comet had split the lunar crust. The rising columns of steam and gas were perhaps unspectacular phenomena in themselves. But there they were, ready to fill a tremendous need. The sleepy internal fires of the Moon were unlikely to be violent. Yet they would push vapors up to the surface here perhaps for centuries.

In balancing benefit against transient damage, was it necessary even to mention that deeper and richer mineral deposits had been laid bare for easy mining by the blast effect of the comet's downfall? All free men — good or bad, and of large or small holdings — were set to gain, Krell included. But better mines were a side-issue.

The prisoners soon heard how roofs of transparent, flexible plastic, brought in bundles like fabric, were being reared over that smashed-up region, to trap escaping volcanic vapors. One tentlike structure. Then another and another.

Here was ample water from volcanic steam, and vast quantities of carbon-dioxide from which ordinary air-rejuvenators could release breathable oxygen. Men who had lived so long in the lunar silence and barrenness, soon saw that these raw materials of life need not only be used locally, but could be piped anywhere.

"Folks have caught on, Cope," Brinker said. "They were a little desolation-balmy, too — hence on our side all the time. Now they'll feel better about my Old Man. There'll be more than one city, I'll bet — clusters of big, plastic air-bubbles, self-sealing against meteor-punctures, warmed inside at night by volcanic heat. It won't happen all at once, but it'll come. Seeds'll be planted, and houses built. Parts of the Moon won't look the same."

Krell's death was part of the turning tide. He was found in Tycho Station, head smashed by a boot-sole of metal; it was good that Brinker was in prison, because his name was printed into Krell's skull.

Who did it? Neither Brinker nor Copeland cared very much. Some wronged stooge of Krell's, no doubt. Let the forces of law figure out the details.

Things got really good for Copeland and Brinker after popular demand forced their vindication. They were feted, honored, praised, rewarded. All Earth knew of them, and feminine colonists arriving as part of a new phase of the Moon's development, shined up to them as heroes.

It is not to be said that they didn't enjoy the advantages of fame. Brinker said more than once: "Forget your Frances, Cope. Problems are easy, these days."

The time came when Copeland growled in answer: "Sure — too easy. Having a lot of pals after the need is gone. No — I'm not criticizing. Most folks are swell. But I'd like to make friends and maybe find love a little more naturally. I thought I'd stay on the Moon; now I think I'll shove off for Mars. People are going there; whole towns are being built, I understand. And there's plenty of room for a lunar tramp, with a prison-record, to get lost ."

Copeland chuckled at the end. His vagabond blood was singing. He was also pitching a come-on at Brinker, for he'd seen him with some letters while they were prisoners. Copeland had glimpsed the name and address of the writer: Dorothy Wells, the big nurse that Brinker had known at Tycho Station. She was in Marsport now.

"By gosh — I guess I'll go too, Cope!" Brinker rumbled.

Looking back, Brinker thought it sort of funny that they were pals. He laughed.

