

## SECOND LANDING

### 1

*"The exploring ship Franklin made its first landing on a remarkable wide-beach on the western coast of Chios, the largest land mass on Thalassia. Using the longest axis of the continent as a base, and the pointed end as seen from space as O", this beach bears 246° from the median point of the base line. . . . The Franklin later berthed inland some four miles 360° from Firing Plaza One on the chart. There is a pleasant savannah here, with a stream of water apparently safe for drinking . . ."*

Astrographic Bureau Publication 11297, Appendix to Space Pilot Vol. 460, Pp. 58-59.

IT WAS NOT plausible that Brett Carstairs should find a picture of a girl, to all appearances human, in millenia-old ruins on a planet some hundreds of light years from Earth. But the whole affair was unlikely, beginning with the report of the exploring ship which caused the Thalassia-Asprasia Expedition in the first place. If it hadn't been for photographs and the ceramic artifacts, nobody would have believed that report. It simply was not credible that another intelligent race should ever have existed in the galaxy. In two centuries of exploration, no hint of extraterrestrial reasoning beings had been found before. But the exploration ship's narrative didn't stop at one impossibility about the twin worlds Thalassia and Asprasia, revolving perpetually about each other as they trailed the satellite sun Rubra on its course. The report wasn't content to claim one intelligent race to have existed. It claimed two. And it offered evidence that some thousands of years before they had fought each other bitterly and mercilessly, and that they had exterminated each other in an interplanetary war which lasted only days or even hours—which was hard to believe.

But the picture of the girl was more impossible than anything else. Brett didn't believe it, even when he held it in his hand. He didn't dare mention it until the thing was all over. •

He didn't find it at the actual beginning, of course. There were preliminaries. The Thalassia-Asprasia, Expedition worked under handicaps. It was based on the exploring ship's report and had to be organized by the Records Division of the Astrographic Survey—which never has any money to spare—and there had to be much skimping in every way and only volunteers could be afforded for the job. Even a ship couldn't be hired for it. The general public was much more excited about the colonization of nearby planetary systems than his research on a planet that wouldn't be needed for colonization in a thousand years. So the Expedition was very small—no more than a dozen members altogether—and it would be landed on Thalassia from an Ecology Bureau ship and left there. It would probably be called for in six months or so. Probably. Even then, what it found out might not matter to anybody else.

Brett joined up because it was his only chance for adventure and because his hobby warranted his inclusion in the staff. He could drive a flier of course—everybody could—but he'd specialized in paleotechnology, the study of ancient industrial processes. If there really had been an intelligent race or races out in space, he could make better guesses than most at how the alien machinery worked and how its factories produced. But his personal reason for going was an odd, anticipatory feeling of excitement at the idea of being left with a small group of human beings on a planet where not even the skies were familiar, from which Sol itself was invisible, and where they would be more terribly alone in a waste of emptiness than any similar group had ever been before.\*

That excitement lasted during the long journey his overdrive and during the almost-as-long approach to planetary landing distance after the Ecology Bureau ship was back in normal space in the Elektra system. When it went into atmosphere on Thalassia and its repulsors droned above the illimitable waters of Thalassia's ocean, Brett watched with fascinated eyes. Waves of this ocean had a twenty thousand mile reach in which to build up to mountainous heights. At this season of the twin planets' year, they had the equivalent of trade winds to urge them on. When they reached the shores of Chios, the planet's only continent, the waves were three hundred feet high, and they seemed to fling spray and spume almost out to space itself. Brett watched the swirling maelstroms and dramatic tumult of the struggle between sea and land. He remembered that at the very edge of the wave-washed area there were to be found the only

moving living things on the continent. They were marine forms like crabs, which scuttled out of the water to forage and darted back to the monstrosly tumultuous coastal foam.

Watching from the Ecology ship, Brett heard the report, that the radar beacon on Chios wasn't working, and he watched as the ship found Firing Plaza Number One and the ruined refugee-settlement nearby, and hovered there to make quite sure of its position before it descended gently at the landing place the exploring ship had advised for later visitors.

It was a pleasant savannah, and the stream ran as clear as crystal. But the Ecology Bureau ship had been grudgingly loaned, and it had urgent business elsewhere. Its cargo ports opened and the Expedition's supplies went out to ground hi a swiftly flowing stream. They piled up moun-tainously, so it seemed, and at that they weren't too complete. The biggest crates were two atmosphere fliers and a short range rocket. The fuel for the rocket made a bigger heap than all the rest of the equipment together. There were plastic tarpaulins to cover everything. There were houses

\* Note: The survival of the crew of the exploring ship *Durwent* on Lundstrom IV for some years after their shipwreck was not known at this time.

to be unfolded and braced back—but at least they weren't inflatable shelters!—and there was a spare beacon. But there wasn't much else but food. The unloading took less than two hours.

Then the skipper of the Ecology Bureau ship asked politely if there were anything else. Minutes later the cargo ports closed and the personnel lock shut, and the ship's repulsors began to drone. It heaved up slowly until it was a few thousand feet up and then went into interplanetary drive and plummeted toward the sky. It would come back in six months, most likely, or another ship would come in its stead. And the Expedition would have to be ready to leave. That was when Brett Carstairs realized the silence on Thalassia. The Expedition's members set to work to make camp. There was a breeze and the vegetation was reasonably familiar in smell, at least—chlorophyl and its associated compounds are found on the oxygen planets of all sol-type stars—and the tree leaves rustled naturally enough. The small stream at the landing place made pleasant liquid sounds. But that was all. No insect stirred or whirred or stridulated. No bird sang. No squirrel barked. No reasonable facsimile of any noise made by any living creature came to the ears of the Thalassia-Aspasia Expedition. The only noises were the voices of the Expedition members themselves, and the bumpings they made with the boxes and crates, and the breeze and the dull booming of the mountainous surf to the westward. Brett caught himself listening uneasily.

"I didn't realize," he said ruefully to Kent, on the other end of a crate that would be a chair presently, "that it was going to sound so lonely."

"It's been lonely here for a good many thousand years," said Kent phlegmatically, "since the race on this planet and the characters on the other one killed each other off."

He put down his end of the crate. He and Brett opened it. They began to assemble the furnishings of the Expedition's housing. All about them was jungle. The clearing in which they worked had a ground cover like ivy running on the ground. It was broad-leaved instead of narrow-leaved as grasses are, and Brett had a feeling that there should be crawling things under it.

But there weren't. The report of the exploring ship was explicit. There had been a very high civilization here, once. And another on the from-here-invisible twin planet As-pasia. Some eight thousand years ago they'd fought each other terribly across the half million miles of space that separated them. Fission bombs with cobalt cases poisoned the air of Thalassia, at the same time that fusion bombs from Thalassia blasted the oasis cities of its twin world to lakes of molten glass. There wasn't a single, air-breathing creature left alive on Thalassia. Not any more.

The air was clean of radioactivity now, to be sure. Carbon-14 and Cobalt-60 determinations timed the deadly war at very close to eight thousand years before. Now there was vegetation and the ocean swarmed with marine organisms from plankton to fish. But there was no moving creature left on the land of the nearly Earth-sized world.

Brett labored on. The atmosphere on Thalassia was depressing. It was a dead world despite its forests and jungles. Everything that had wings or a throat—even teeth to bite or stings to sting with—had died millennia ago with the doomed creatures whose friable skeletons the exploring ship had found about the firing plaza. They'd died of the bombs from the other planet, which was forever invisible from here. They'd been murdered. Butchered. The forests had no purpose with no animals to live in them. There was a feeling of grief in the air, as if even the trees mourned.

Brett wanted to go over to the firing plaza and see where at least there had been living things, even if the only sure knowledge about them was that they had died in the act of firing giant rockets to avenge the extermination of their race. When they died, Thalassia was already a charnel house. Now—

There was quiet. A terrible quiet. The Expedition members braced their houses, moved the laboratory equipment inside, uncrated their fliers and tied them down, ran their power lines, dug their refrigeration pits, put in sanitary equipment and set their water recovery plant to work. It was safer to condense water from the air than to use the local water supplies which might still carry undesirable trace elements. Brett began to worry that it would be too late to go to the firing plaza before dark. Then he remembered. He looked up at the sky. It was mostly blue, but it was speckled. There was a dull red pinpoint of light near the horizon. That wasn't Elecktra, the sun and center of gravity of this system. It was Rubra, the red dwarf, the satellite sun the size of Earth's Jupiter, which shared an orbit with the twin planets. They were in Trojan relationship to it, sixty degrees behind as it sped sullenly about its primary. Elecktra itself was not visible. But there was no night.

Off to what ought to be the west there was a spotty bright luminosity in the sky. It was the star cluster Fanis Venitici, on whose fringe this solar system lay. The multiple suns of the cluster swarmed so closely and shone so brightly at the cluster's heart that even thirty light years away they gave Thalassia more light than its own and proper sun.

There would be no night on Thalassia.

Brett had known it, of course, but nevertheless he was relieved. A dead planet is gloomy enough in the daytime, with all its vegetation grieving that it has no purpose. At night it would be intolerable. Even in the daytime it would be hard to keep one's mind busy.

Brett worked at it. He had driven pegs and was tying down the tarpaulin over a mound of crates when he saw the heap of dirt. It did not have any ground cover plants on it. It was piled up. It had been rained on, but it was freshly dug. Brett pounded two more pegs and double-knotted the ropes that would hold the tarpaulin in any wind. Then he jumped. Kent, by that time, was pounding in more pegs on the other side of the pile of stores.

Brett stared at the piled-up dirt. It was surprisingly Earthlike. The top of the ground was dark humus from rotted vegetation, and six or eight inches down it turned to clay, very much like a freshly dug hole on Earth. But there shouldn't be any freshly dug hole on Thalassia! Nothing lived here! Nothing!

But there was a freshly dug hole in the ground, with clay on top of the thrown out humus.

Brett stopped driving pegs and went to make sure. He stared down. He felt himself growing queasy—sickish—and pale. There were scraps of human-made paper at the bottom of the hole. There were traces of the rotted debris any group of humans will discard, but which humans auto-

atically put out of sight before they leave any stopping place. This savannah had been the berthing place of the exploring ship *Franklin*. This was where the explorers had buried their trash. Something had dug it up.

More, something had very carefully sorted it out, as human scientists sort out the rubbish heaps—the kitchen middens—of a forgotten culture to find out what made it tick.

Something had carefully examined an exploring ship's kitchen midden to find out what sort of beings human beings might be. Men from Earth wouldn't have needed to do that. They knew.

Something intelligent and curious, but not from Earth, had wanted to know about men, on a planet where there had been nothing even breathing, much less intelligent, for eight millenia. But something had been alive on the dead planet Thalassia. It had wanted to know about the men who'd camped here from the exploring ship two years before.

Brett was pale when he called Kent to look. Kent looked phlegmatically down into the hole and said:

"That's the *Franklin's* garbage pit. Why'd they dig it up again?"

Brett said:

"They didn't. Somebody not on the *Franklin* dug it up. Lately. It's been rained on, but nothing's grown over it. In two years it would have been washed flat and covered over. This was dug long after the *Franklin* left. Lately. Probably within days. Just before we arrived."

He shouted, and the trees nearby echoed back his voice with a hair-raising resonance. Halliday, the official head of the Expedition, came fretfully to see what was the matter. Brett showed him. Halliday stared blankly for a second. He

even began to frown because Brett had called him for nothing. But then the breath went out of him with a curious whooshing sound. His face went quite gray.

"And the ship's gone!" he said irritably. "It can't take word back! There is life here after all! Intelligent life! We're at its mercy!"

Which was absolutely true. Because *Thalassia* was dead, and below-the-horizon *Aspasia* with it. There could be no animals to hunt or need defense from: no birds or small creatures to collect. This was strictly an archaeological expedition to work on two worlds which had committed suicide together. So there were no defense weapons in the Expedition's equipment. Heat guns, yes. They were handy for lighting fires. There were some explosives for shifting rock. But there were no more weapons capable of defending men against really dangerous creatures than a man will take on a camping trip in a national park on Earth. And the Expedition could not communicate with other humans for at least six months. They were hundreds of light years from help.

Brett said slowly:

"On the ship, just before we landed, I heard it said that the radar-beacon on the ground here wasn't working. I think, sir, we'd better go over to the firing plaza and find out the worst."

They went to the firing plaza. There had been a beacon there, left to notify Earth ships where the first exploring ship had landed. It would also notify any other intelligent race which dealt in such things as radar. There were a dozen men who went uneasily to see if anything had happened to make their landing unfortunate. They were defenseless, and more isolated from their kind than any humans had ever been before.

There was no sound anywhere save the wind in the trees. No bird song. No insect cry. Nothing but the ominous dull booming of the gigantic surf to the west. The ship that had brought them was long since in overdrive and unreachable by any means until it came back to normal space again.

They found where the beacon had been. It was gone. It had been a complex mechanism, powered by a pinch of atomic pile residue. It should have sent out its signal, on a standard frequency, for years to come. It had been mounted on a solid concrete pillar, according to custom.

The concrete pillar was there, but the radar beacon was not. It had been cut from its anchorage with something like a torch which cut the metal smoothly. There was as yet no oxidation on the severed surfaces.

The first landing plaque had been removed from the same column. It was the plaque which recited that the exploring ship *Franklin* had made a first landing on this

planet on such and such a day and year, Earth Calendar. Close by the column there was a rocket blast crater in the ground—a small one, perhaps six or seven feet across. It was fresh. A rocket had landed here and removed the man-made objects after studying a human refuse pit. Within days. Certainly within weeks.

It had left something of its own behind, though. There was a metal tripod set up on the ground. It was about man-height high, with a box at its top shaped like an *inverted* cone. There were round holes on four sides of the box. It was not placed on any foundation—simply set up on the ground for some temporary purpose. And left behind.

Kent, his face blankly curious, moved to approach it.

"Hold up!" said Brett, very pale. "That could be a thing to collect specimens!"

Kent stopped. Halliday, the Expedition head, turned his face to Brett.

"Specimens?"

"Us," said Brett harshly. "We set traps to collect specimens for study when we're making an ecology study of a planet! It would be logical for something intelligent to want to see specimens of the creatures that make garbage pits and radar beacons and landing plaques!" ,

There was a long pause. Then Halliday said in a flat voice:

"Yes. There are eyes in the thing, too. Or lenses. It could be a collection trap. Or it could be transmitting pictures of us to somewhere, on a frequency our ship wasn't set to detect. We will—go back to the camp and think it over."

He moved to go back, and the others with him. The alien tripod glittered in the peculiar dead-white light which did not come from the sun. Brett stared at it as he moved to follow the others. This was a singularly unsatisfactory state of affairs. Humans do not like to feel defenseless. Brett hated the tripod he was afraid for anybody to touch. He did not

even feel that his specialty of paleotechnology qualified him to guess what it was. It could be a trap, or a beacon, or a transmitter. It could be anything.

His foot caught in something as he moved away from it. His heart jumped into his throat. It could be a trip wire. . .

But it wasn't. It was a tiny golden chain, very humanlike in manufacture. It had broken. Brett picked it up very cautiously. A locket started to slither off. He picked that up, too. It had the feel of a human artifact. It was. It had been made by hand.

There was a picture of a girl in it, under a protecting sheet of plastic. She was a human girl, though her costume was like none that Brett had ever seen or heard of. The picture was black-and-white—an ancient process—but it was unfaded, which meant that it had been made recently.

This, of course, was starkly impossible. One does not find a picture of a human girl in the ruins of an eight-thousand-year-old culture, on a planet hundreds of light years from Earth. Not a picture in an antiquated medium, long forgotten, and with a background neither this planet nor of Earth. It was so completely impossible that Brett knew he wouldn't dare show it to any of his companions. They wouldn't believe he'd found it. It couldn't be!

2

" . . . *The Elektran solar system displays certain anomalies, not only in the existence of a satellite sun Rubra, no larger than a gas-giant planet. . . (but in) the twin worlds Thalassia and Aspasia, each nearly seven thousand miles in diameter, which revolve about each other at a distance of only 250,000 miles. Tidal strains have long since ended their diurnal rotation and they turn the same faces toward each other during their period of revolution of not quite twenty-five days. This nearness and the development of intelligent races on both planets led to the development of interplanetary communication between them some time between 7000 and 11,000 years ago. The tragic results of this communication . . .*

Astrographic Bureau Publication 11297, Appendix to Space Pilot Vol. 460, Sector XXXIV. P. 56.

A TRENCHING machine with its buckets removed went toiling painfully up to the alien tripod some six hours later. It was under remote control. It skirted the elongated opening of a concrete tunnel, made by the long dead six-fingered race of which the exploration ship had found skeletal remains. There were thirty or more of those tunnels, which of course no member of the Expedition had yet entered. But the *Franklin's* report said that they had been launching tubes for giant rockets. The rockets had gone roaring out over the ocean, rising steadily, until they swept round the curve of the planet to blast across space and loose destruction upon the sister world Aspasia. The firing plaza took its name from these tunnels. The refugee settlement—still-roofed houses of lignin plastic—had obviously been the shelter in which the dying, despairing Thalassians lived while they took their revenge for the destruction of their race.

The trench-digger ground and rumbled and blundered on its way. Once a side tread slipped and it stalled in a thicket of trees it could not push down. It backed out and went bumbling on toward the bright new metal of the tripod.

Back at the camp, the vision screen which showed what the trenching machine saw pictured the firing plaza as looking like an abandoned area of Earth, with long slanting shadows and stark contrasts of illumination.

The robot machine went on. It was taller than a man, and its outline from the front was not dissimilar. It approached the glistening three-legged object with the inverted cane on top. At the camp, the members of the Expedition watched the screen. Brett Carstairs felt acutely uncomfortable. He'd been suspicious because his training in technical processes naturally made him suspect ancient psychological processes in all unfamiliar objects. But of course the tripod could be completely harmless and incapable of doing damage—

It wasn't.

The trenching machine drew nearer. Twenty yards. Ten. Five yards. Ten feet, and the round holes in the conical box looked more than ever like eyes. The trenching machine bumped the tripod. The tripod toppled over.

Back at the camp, there was a flash of light and the members of the Expedition looked at a blistered, blackened, peeling screen. The sound of the detonation came seconds later, and it was like a blow in the chest. At the same instant the ground bucked violently. There was a light brighter than the sun.

There was simply no virtue in running away. Brett said numbly to himself, though he didn't hear the words as formed:

*"Atomic explosion. We're dead, now."*

He got up stiffly from his seat. He went outside the hut. He looked toward the firing plaza two miles away. There was a hill between, but he saw a gigantic smoke ring spinning toward the sky. There was a horrible, incandescent, two-branched fountain in the air. Flame poured up and poured up and poured up skyward, while Brett did not realize that he was deafened and hardly perceived the incredible roar.

Others came out of the hut. Belmont, the nuclear man of the Expedition, very absurdly carried something from his laboratory, at which he looked intently without raising his eyes to the sky. Halliday looked at the fountain of flame with an expression of embittered indignation. Jannings, the meteorologist, stared and stared and then ridiculously wetted his finger and held it up, his air one of complete absorption.

- One flame suddenly began to diminish. It failed rapidly in intensity. In seconds it had lessened to a mere glow to be seen over the hillcrest between. The other flame burned more and more luridly—and abruptly stopped. But the rising smoke ring still hurtled upward, expanding as it rose. It was ten thousand feet up. Fifteen thousand. Jannings watched it with his head thrown back and his wetted finger still absurdly held aloft. His lips moved, but Brett did not hear anything at all.

People did unreasonable things. Brett saw the Expedition's official flier pilot very solemnly take a cigarette from his pocket and very solemnly tap it against the back of his hand and put it in his mouth and puff on it. He very carefully blew a smoke ring of his own, staring blankly where the fountains of flame had risen. There was steam rising there now.

Then Jannings' voice came, very faintly, like a remembered sound rather than like an actual noise.

"There's a wind from the ocean," said Jannings thinly. "It's blowing the atom cloud inland. There's a wind from the ocean. It's blowing the atom cloud inland. There's a wind from the ocean—"

He repeated the words over and over, like an automaton. His voice grew stronger as Johnny's hearing came back. And suddenly, it seemed, they were all released from a sort of hypnosis of shock, and Belmont looked up from his radiation counter and said in a sort of mild astonishment:

"Ten more seconds and we'd have had a burning exposure!"

Then a babbling of voices. There was a crazy confusion all around. Voices cried, "We've got to move camp!" Voices asked imploringly, "Are we burned? Are we burned?" Then Halliday displayed unsuspected leadership and bellowed at them in a shaking voice and took matters in hand.

The first requisite was information. But an even greater need was action. It is not healthy to camp within two miles of a recent atomic explosion site. Wind blowing from it to one's camp will hardly be salubrious. Halliday crackled orders. While Brett helped loose one of the two fliers from its tie-down ropes, Halliday had other men dragging out emergency rations and canteens and the rolled-up inflatable shelters that could be used to live in. As he snapped instructions, Halliday interjected odd fragments of thought as if everything that came into his head also came out of Ms mouth.

The flier took off vertically and swept toward the ocean, on shouted last minute instructions from Belmont to stay upwind. Halliday stopped his stream of feverish instruction as Brett came back from the takeoff spot.

"Good work, Carstairs!" said Halliday. His thinning white hair blew erratically about his head. "Your suspicions made that tripod go off with us two miles away instead of right on top of it."

Brett wetted his lips. He'd had time to begin to feel shaky, now, but the churning up of all his emotions somehow made his mind work feverishly. He said abruptly:

"The tripod didn't explode. There were three things going off. One atomic explosion and two fizz-offs. Where the bomb went off there couldn't have been anything left behind to make those flames!" Brett heard himself saying:

"The firing plaza was booby-trapped!"

Halliday had opened his mouth to shout an order, but he stopped short.

*"Wha-a-a-at?"*

"There were three bombs," said Brett shakily, "and only one went off properly. The two fizz-offs—they didn't make critical mass fast enough. Their active material vaporized instead of detonating. At a guess, they were too old to work right."

"Too old—"

Brett made a helpless gesture.

"I know it sounds crazy! But new bombs should blow! And there was a war on this planet once. The people died. But they were getting even while they died. Wouldn't it be reasonable that if they knew they were going to be wiped out, by radiation that poisoned the air they breathed but which would die out in time, wouldn't it be reasonable that they should set booby-traps to kill their enemies if any of them lived and their descendants came here later?"

The flier, circling two thousand feet up and to windward of the atom column, came streaking down toward the Expedition's camp. Halliday opened his mouth, closed it, and came to a rational decision.

"That will have to be discussed later. You fly? Take the second flier and scout a camping place not less than fifty miles up the coast. Pick a place that should not have any artifacts about. Then come back. We will shift camp to avoid possible radiation in case the wind changes. We don't know whether it will or not, but we have to be out of range in any event."

He made a pushing motion at Brett and turned back to the work at hand. Brett went to the second flier and loosened it.

He was aloft before the first flier had landed, and he headed north. An idea occurred to him, and he dropped lower. The planet Thalassia might be dead, but something other than men from Earth had been here very recently. Flying high would make him invisible to eyes on the ground, but would make him visible indeed to detection radar. If there were intelligent creatures on Thalassia now, they would take precautions against unexpected encounters with other creatures who dug garbage pits and set up radar beacons and first landing plaques. Very probably the tripod had been a device to give notice if these strange creatures returned. So it would be wise to fly low.

He flew slowly—slowly enough to estimate distance and examine the shoreline. It was incredible. There were places where highlands ended abruptly at the shore. At those places mountainous masses of spray and foam shot upward where the breakers struck. There was one place where the beach matched the human exploring ship's first beach touching. There was shining sand and boulders for a full mile inland. The breakers themselves rolled in like rows of skyscrapers and crashed with even more catastrophic sounds. On Earth, in the South Pacific, winds could blow completely around the Antarctic continent and build up waves with seventy foot crests. But Thalassia was all ocean save for the one continent and a few dependent, nearby islands. Trade winds blowing would have a twenty-thousand-mile reach in which to make these waves. The gravity here, too, was a little less than on Earth. They should be monstrous!

So Brett Carstairs flew at five hundred feet above the ground, a mile inshore from the breaker line, and saw waves not less than three hundred feet high and often higher come roaring in toward him, and he saw them fling spume in masses higher than he flew. Sometimes he thought he saw living things in the water, but he was not sure. Once he did see a stranded sea monster, frayed and tattered by corruption, but that was not his present business.

Just at the distance Halliday had named, he found a running stream winding down into the ocean, only to be lost in its surf. He followed it inland for some miles. He saw an adequate place of refuge for the Expedition. He landed. He made sure. The river was fresh and ran a hundred yards wide between steep cliffs, yet there was some clear ground and at least one spot where giant trees almost met above the water. The Expedition would be undetectable from the air, under the shelter of an overhanging shelf. Its fliers could be hidden under the leafy screen. It would do.

It was on the way back that it occurred to Brett that the ship which would come to pick up the Expedition six months from now would not know where to look for it. And—it would be highly vulnerable to whatever had placed that metal tripod on the firing plaza.

Then he thought to wonder what would happen if a ship landed on a firing plaza. Or in the ruins of a city. The exploring ship had not spotted any cities undestroyed by bombs. But just suppose . . .

He landed, feeling an extremely queasy sensation at the pit of his stomach. When he saw the pictures of the plaza as it looked now, he was even less comfortable. The entire group of ancient rocket launching tunnels had been nearly two miles in extent. There was a half-mile crater where an atom bomb had gone off underground. It was a cleanly blasted hollow, lined with glass. It was nowhere near the spot where the tripod had been. There were two other incandescent holes, gaping wide and still pouring out clouds of steam. They were irregularly shaped and twenty feet or more across. There had been other bombs underground at those places, too, but instead of blasting in the millionth of a second they had gone off slowly, disintegrating in seconds and vaporizing most of their own material before it could disintegrate. The critical mass hadn't been achieved quickly enough to blow them. It was exactly the kind of failure that could be expected of a brilliantly designed booby-trap that happened not to be sprung for some thousands of years. The location of these bombs, also, had no relationship to the position of the tripod.

The blast had not been the tripod, but bombs buried by the long-exterminated inhabitants of Thalassia, to destroy any creature landing on their world after its air was sweet and clean again.

Brett reported his choice of a new camping place. He found his guesses about the booby-trapping of the plaza accepted as verified. They were. But Halliday said querulously:

"What the devil was the tripod?"

"It could have been a beacon," said Brett, "with variations. The exploring ship set up a beacon to guide Earth ships to its landing place, so they wouldn't need to repeat all the work it had done. But suppose—well—people not from Earth wanted to find out if all the Thalassians were really dead? There was a beacon. Life had been around, recently. They might have dozens of these tripods at different places. Anything alive would go up to them and examine them. The eyes might modify the signal they sent. Anything intelligent and alive would be reported, either by a change in the tripod's signal, or by the fact that its signal stopped."

Brett had worked out the notion during his flight to the north and back. Halliday blinked. He turned and barked at somebody. Emergency equipment was being loaded into both fliers. He turned back to Brett:

"What set off the booby trap?"

"The toppling of the tripod, most likely," suggested Brett. "It would be sending a tight beam straight up. When it fell over, it would send that beam at the ground. High frequency surges would be induced. They could set off an electronic trigger that was designed to blow the bombs when a ship landed nearby. The creatures who were wiped out might want to kill their enemies whenever they turned up, even after thousands of years."

Then Halliday said in a flat voice:

"But something did land! It took the human beacon, and set up the tripod, and we saw its rocket crater where it took off."

"It wasn't big," said Brett. "If the Thalassians were unpleasant enough, they might scheme so a scout ship could land and take off unharmed, but a passenger liner bringing colonists would be wiped out."

Halliday nodded sourly.

"A nice thought! If you're right, then that tripod might have been set up by the creatures the Thalassians set their booby-traps for! And if Aspasians are beginning to explore this planet again, they'll take us for Thalassians!

They'll try to murder us." Then he said bitterly: "How

can we do our work if bloodthirsty creatures are trying to hunt us down and kill us? How can we do our work?"

Brett offered no ideas. He helped load his flier, conferred briefly with the pilot of the other, and they took off together. He led the way to the campsite he'd chosen. He left his load and two passengers. The other flier did the same. They



went back. Fifty miles along the coast. They loaded up. They returned. They went back again. Nobody thought of relaxing. At the new campsite a biologist was at work on nearby fruits, and someone was fishing. Fish, too, would be tested for edibility. Brett flew and flew and flew. One trip after another. The two fliers ferried supplies in quantity. Equipment was another matter. Once the route was established, the work grew tedious. Half an hour to load up. Ten minutes to fly fifty miles. Half an hour to unload.

Because there was no night, exhaustion came upon Brett before he realized it. He had no time to examine the handmade golden locket in detail. He had it tucked carefully away and he almost resented it because it was so simply and starkly impossible. The girl was pretty enough. But she could not exist! And there was something more urgent on hand than speculations upon the reality of the impossible. The Expedition had to survive. Brett wearily applied his mind to make that practical.

But weariness hit him suddenly. He nearly flubbed a landing on the river, at last. Halliday snapped at him:

"We can't move everything, Carstairs, but it is urgent that we get all possible supplies to this new site. You must be more careful!"

Brett said tiredly;

"It might be a good idea to leave behind as much as we can."

"What?" fumed Halliday. "Leave supplies we need?"

Brett yawned uncontrollably.

"Whoever or whatever left the tripod," he said drearily, "will probably go back when it—they—find it has stopped reporting. There'll be a bomb crater and the fizz off holes. If we've left a lot of stuff, houses and all the rest, they may think we simply went to the firing plaza to look at their tripod and didn't come back. Because the bomb blew. That might be useful to us."

Halliday fumed again.

"You irritate me," he said peevishly. "I should think of such things, not you! But it is sound thinking. Go get some rest!"

Brett got out of the flier. He stumbled up to the encampment under its shelf of stone. He heard the sound of chopping. There were cave mouths here, but the caves were shallow. Somebody was hacking at the back wall of one of them. It was a wall—an artificial wall. After eight thousand years it was not a solid barrier, and it had been hastily constructed. It was Kent who was hacking at the tiers of stones.

"Looks like a sealed-up cave," he told Brett phleg-matically. "It could be anything—even a place where Thalassians tried to seal themselves in with air-renewal apparatus to last out the time the air was poisoned. It wouldn't work, of course. The air could've been deadly for five or fifty or five hundred years, depending on the amount of radioactivity in it. But if there's any size to this, it might make a good shelter for us, and we ought to find some stuff in it."

Johnny nodded sleepily. He thought to look at his wrist chronometer. It was some thirty-eight hours since the Expedition's landing. He'd worked steadily for all that length of time.

Kent's pick went through the wall. Nothing hi particular happened. Kent pulled rocks away. Crumbled mortar came with them. He enlarged the hole hi a matter-of-fact fashion. Presently it was of a size to permit easy entrance. No particular smell came out. The inside air was cooler. That was all. Kent went and got a handlight. He cast its fierce glare inside. He nodded his head, put down the light, and went away.

Brett picked up the light and threw it through the opening. He saw shining wet walls, and stalactites and stalagmites. There was an artificial curved ramp leading away somewhere between a pair of limestone cave formations. There was a curious small heap on the artificially flattened floor. He focused the light on it.

Bones. They looked human. They were cemented to the floor by an aeons-old layer of glistening, almost transparent mineral.

Brett entered, blinking. The skeletons were well-enough preserved to be tragic, but he remembered that the ancient race had had six fingers and other not-quite-usual features. He looked. Yes. The interior of this place was squared and leveled. It had been worked into shape. There was a tunnel leading off to the left and he glanced in. A low-ceiling room, crowded with objects in rows. Machines. More skeletons. He stood rocking on his feet with

weariness. He thought: *"Now we'll know something about a civilization that was killed while our ancestors were still hunting mammoths."* He should have been excited, but somehow he wasn't. Then he realized why.

The objects so neatly arranged in rows were not machines. They had been, but they weren't any longer. They were heaps of rust. Swollen, nodular distorted heaps of oxide of iron and copper and—yes—even aluminum. They were old! They were mineralized. But they had been mineralized after they had been destroyed. He heard voices. Kent was bringing the rest of the Expedition inside. Lights flickered and flashed. He heard shoutings, Men crowded past the compartment he stared at, exclaimed exultantly, and went on. Voices echoed eerily. The mood of the Expedition was the excited rejoicing of children with a newly discovered playground. But what they were exploring was a tomb. Here despairing six-fingered creatures had walled themselves in from the light and air of their own world to try to outlive its poisoning. They had expected perhaps a thousand years of entombment. But it was forever.

Brett was too tired for any emotional reaction. He found himself mumbling:

"They forgot that there's always some water in caves. Water makes them. And water seeping down would be radioactive. So they died."

He made his way heavily back toward the opening Kent had made. He went to the outer cave, where there were sleeping bags. Halliday met him. Halliday carried more handlights.

"Ah, Carstairs!" he said exuberantly. "You picked a lucky place! When I learned the firing plaza had been booby-trapped I was really in despair! I thought any other site would be booby-trapped too. I thought we might be unable to work at all! But here we've got a bolt hole they tried to make use of! Artifacts! Skeletons! We can get a marvelous picture of their civilization under stress! Marvelous!"

He bobbed into the hole in the wall and was gone.

Brett found a sleeping bag and crawled into it. He went to sleep. It seemed to him that around him as he slept there were excited ejaculations and much scurrying about. The members of the Expedition were scientists come to examine a dead civilization. It had seemed that they would have nothing to examine and would soon be dead themselves. Now they had work to do, even hi hiding. They rejoiced.

But some time during his slumber, Brett dreamed. In his dream has saw the girl of the impossible handmade golden locket. He did not know where he was, but she looked at him. And her eyes grew wide and horrified. She screamed, and figures came running from somewhere. At sight of Brett they howled with fury and drew strange weapons and came rushing to kill him.

### 3

*"... On the hemisphere facing Aspasia, Tha-lassia's twin planet, there is but one rocky island not constantly swept by the ocean's giant swells. Evidences of former occupation exist here, but the island has been wave-swept in what must have been enormously violent storms, and only excavations for what may have been an observatory and military base remain. . . ."*

Astrographic Survey Publication 11297. Appendix to Space Pilot Vol. 460, Sector XXXIV. P. 71.

THE CONTENTS of the cave were of interest to the biologist, the archeologists, the camera specialist, the specimen-preservation member of the Expedition's staff, the palaen-tologist, the historian, to Halliday, Belmont, Janney—to

everyone in fact, but Brett. They would have been of interest to him too, if it had happened that the cave were dry. But there was no single metal object not corroded out of all imaginable resemblance to its original form. The relatively few ceramic remains he could identify as having been made by injection-moulding and fired within their moulds. That meant a remarkably high state of civilization. But there was no object suitable for his examination as a technological object. The restoration specialist began the extremely tedious process of redisplacement on them. With suitable precautions, a heap of rust can electrolytically be restored to its original condition of solidity and form—if the rust has not been disturbed. But it is an excruciatingly slow affair.

Brett had no proper function hi the cavern underground.

He helped set up a sky-scanner outside. It would detect a repulsor field, meaning a human ship maneuvering in atmosphere. He helped set up an automatic signaling device to be triggered by the detection of such a field. It would instantly transmit to the Earthship a warning of danger and the need for caution, and then shut off. If any space vessel came into Thalassia's atmosphere using an Earth type drive, this combination of instruments would warn both ship and Expedition. After due assurance that each was what it claimed to be, they could get together, the Expedition could reembark, and everybody could get away from Thalassia. Then further action would be taken by the Earth government. This was Halliday's decision, and it was reasonable enough.

But after this prosaic matter was settled, Brett fidgeted. The other members of the Expedition were happy. The cave had been sealed in life lock, in which Thalassians had hoped to survive their planet's doom. They succeeded in leaving only innumerable objects and items informative to Earth scientists. There were the skeletons of more than three hundred of the six-fingered, six-toed bipeds for study. Either their air renewers had failed them, or radioactivity came down to the cave in the ground water. The cave was of great extent. It went deep into the hillside for more than half a mile, and many possible extensions had been sealed off, at that. All its new occupants, save Brett, exulted over the scientific material to be worked with. He brooded.

Generators came from the first campsite, power lines ran into the cave, and the due examination of the ancient civilization of Thalassia began, though the investigators were in hiding even as they worked. Other city sites or possible un-bombed settlements would have been ruled out anyhow, now, with knowledge of the Thalassian tendency toward booby-traps. But this site seemed safe enough. The creatures who occupied this expected to live, unlike those at the firing plaza. But as a general thing, Thalassian sites would have to be regarded with suspicion. The ancient dead had made no distinction in their enmity for the enemies who had destroyed them, and possible innocent explorers.

But Brett brooded unhappily over the locket, since he had no chance to be useful at the moment. He told himself very carefully that the locket had been dropped by somebody on the exploring ship *Franklin*, and he'd happened to find it. The background might be Alpha Centauras or Rigel. But he didn't believe it.

The happy labor of the Expedition went on. Brett explored the cave again. Naturally. He checked the redisplacement boxes, set up around the artifacts he could tell something about in the course of several months of restoration. He looked at the skeletons. Halliday was zestfully at work on a modeled restoration of a Thalassian as he looked in life, based on the measurements of a skull. As Halliday modeled it, the Thalassian looked remarkably human.

"But," said Brett, "aren't you inclined to model the creature rather too much in our own image?"

Halliday was the Expedition's sculptor as well as its head. He frowned.

"You are very annoying, Carstairs!" he said dourly. "They were humanoid. Save for a rather prognathus jaw and this difference—here—in the occiput, this could be a human skull! Oh, the sutures are different, too, but—" Then he fumed.

"You have made me realize that there is no reason for my having assumed a human ear shape," he snapped. "You irritate me! Go somewhere! Do something! You disagree with me too often, and too often I suspect that you are right! Contrive some project of your own, and let me make my own mistakes!"

Brett said slowly, because he had thought something out very carefully but still wasn't confident of his reasoning.

"I'd like to take a look at Aspasia. Not by rocket," he added painstakingly. "They would be looking for trouble! But the pilot book says there's one island on the other hemisphere. I'd like to see if there's another tripod set up on that. If I could record its signal where nobody's been near it, we might be able to forge it for the firing plaza site. Simply to avoid attracting—ah—unfavorable attention."

This was not all the truth. He was thinking again of the girl in the locket. But that was entirely too preposterous to mention. Halliday blinked at him, his hands covered with clay from his modeling. Then he added:

"I authorize that," he said, "yes. But I make one stipulation. You will arrange to detect radar on your flier, and if a radar does play on you, you will make sure you do not lead any—ah—creatures back here to us."

Brett agreed, wryly. He was a little relieved. But he asked:

"Are you worried, too, that whoever took the beacon at the firing plaza might want to take a human space ship to examine in the same way? To study it and perhaps duplicate it in quantity?"

Halliday sputtered.

"Of course I'm worried!" he said angrily. "If I could prevent a ship from coming here to pick us up I would—and remain here for always. It would be my duty! If there is an intelligent race which does not know of humanity's existence—we do not want it to learn from a shattered space ship! We would not want them to know our interstellar drive! Certainly not if humanity were not aware that they had learned! But you, Carstairs, annoy me by thinking of the things that would keep me awake nights if there were nights here!"

Brett nodded thoughtfully. He'd been considering the fix the Expedition was in from many different angles. It was possible to acquire cold chills down one's spine, any time, simply by imagining what might happen if an inimical race of intelligent creatures became possessed of an Earth interstellar ship and was able to fathom its workings. If Earth were unwarned, its first inkling of danger could be

an attack as murderous as had been made on Thalassia—« and on Aspasia, too.

Something had to be done to find out the actual extent of the danger. Brett had ideas of less than total fatality. But he needed to make sure.

He took three twenty-four-hour periods to get ready for the journey he was to make. The flier, of course, could stay aloft almost indefinitely. With the slightly lesser gravity of Thalassia, it could carry a heavier load, too.

He made one low level flight back to the original camp. The geiger counter reading of radiation was a bare two points above normal for this world. He got some special equipment—taking care to leave the camp looking as if its owners had simply walked over to the firing plaza and had not come back. He worked. Then he consulted Janney about probable meteorological conditions.

He took off and flew a thousand miles along the coastline to what would be the radar shadow of the seacoast waves. After that he struck out across the ocean. The flier was a standard Earth type utility job, capable of speeds up to six hundred miles an hour, but cruising under three hundred. For work on the continent of Chios, Brett would not have worried about fuel. But according to the exploration ship report, he had a long, long journey before him.

He flew and flew and flew. It was very tedious, and it did not help that he was staking his life on a guess he was by no means sure about. He watched the flier on automatic control for four hours running. It did not change course by the fraction of a degree, nor change altitude by as much as fifty feet. In the end he went uneasily to sleep.

When he woke, the look of things had changed. The ocean had been deep, deep blue and the light came only from the speckled brightness in the sky which was the heart of the Cards Venitici star cluster. Now those stars had been left below the horizon behind him, though there were still speckles in the heavens. Rising, however, there was Elektra. It seemed exactly the size of Sol as seen from Earth, and its brightness was diminished just enough so he could bear to look at it directly. Warmth came from it. It was markedly yellower than Brett's home sun. And the ocean below him had become an astonishing hue which was still blue, but verged upon purple.

These, though, were items he noticed later.

He saw Aspasia, already above the horizon.

It was monstrous in size. It was nearly four times the diameter of the moon as seen from Earth, and it filled sixteen times as much of the sky. It covered a larger space than Brett's fist held before him. It was the size of a ship's vision-port looked at five feet away. It seemed to crowd the heavens. It seemed plunging terribly toward Thalassia. It was like a gigantic missile falling, seeming forever about to crush the planet above which Brett's small flier flew.

He stared at it for a long time before he could be quite reasonable about it. If he'd watched it rising as the flier made its way around Thalassia's curve—gigantic even then, filling a quarter of a quadrant of the world's edge—its present appearance might have been less of a shock. But he had slept until it was a fourth of the way up toward the zenith.

He saw it as sandy-colored, with mottled patches which he knew were deserts and precipitous mountain ranges. There were tiny blue pittings here and there, many of them. They would be the enormous blue-glass lakes the exploring ship had reported and believed to be the sites of once existent cities, melted to glassy liquid by fusion

bombs from Thalassia in the long ago atomic war. They were solidified now. Brett saw some areas which might be merely semiarid plains. There were a few noticeable veinings which had olive-colored borders. They were Aspasia's few and narrow seas. They were mere channels.

Seen with the naked eye, Thalassia's serene and battered sister planet seemed very suitably named. It looked as the courtesan Aspasia might have looked when old and all her beauty gone, made grotesque by the bedizenments which once would have seemed so charming.

Brett Carstairs stared up at the world whose inhabitants had wiped out the race native to this and had in turn—so it appeared—been exterminated by the dying Thalassians as their cities became charnel houses and their continent a tomb.

As he stared, something said, "*Beep*" in the flier's cabin. He jumped, and his heart climbed to his throat. He stared at the dial of his recently contrived radar detector. The needle flickered wildly, but settled nowhere at all. Brett nodded subduely to himself. Anybody who was curious about men, and carried away their radar beacon and first landing plaque, and dug up a refuse pit to examine their kitchen midden—such a creature would want warning of a possible encounter. And such a warning had just been secured. That single startled chirp had been a radar impulse touching the flier. Things did not look good.

The flier went on and on over the wind-purple sea. Brett scanned the ocean. A monstrous swell, far away, broke in a smother of white foam. Some subsea mountain almost reached the surface. The giant ocean waves broke upon it, as they do on shallows and fishing banks on Earth. Here there was half a square mile of white.

The white was assurance that the flier was on course, but the radar chirp was even more important. It was ominous because it was solitary, though only a paleotechnologist would have realized it. Radar is an ancient device, of course. A modern radar brings back to a space ship an amount of detailed information which is really astonishing. But it does it with different impulses of different wave form and frequency. To Brett's knowledge, not since the last war on Earth had any radar shut itself off when it contacted an object. It was a spotting device which did not betray its position to the thing it spotted.

Brett felt those unhappy cold prickles which are the signs of danger realized. Any rational man feels them. Only, a resolute man grows angry and becomes reckless because he is ashamed of being apprehensive.

Brett did.

He scowled and placed a reproduction of an ancient weapon handy. He had not the materials for a modern blaster, of course. But he'd gone back to the first camp and taken a drum of rocket fuel, and labored at the improvisation of an antique open breech gun. He made shells for it of plastic. The heavy rocket fuel would give mass to the missiles. He'd made what used to be called a bazooka. He drove the flier on.

The tip of an island rose above the horizon. Slowly, almost imperceptibly, it rose and grew. It was a group of rocky needles rising from the sea. It was the one island in a hemisphere of ocean. The outer needles or rock were monstrous monoliths against which the giant sea swells

crashed. There were single columns, hundreds of yards thick and hundreds of yards high, about and over which the spume flew wildly. There were surging maelstroms among those outer rocks. Wild swirlings, incredible violence, unpredictable floods raged in the channels between them. Had this been on Earth—but there were no such waves on Earth—the air about the island would have been a cloud of sea birds. But no life showed here. Naturally!

The island appeared very close, and Brett's throat tended to become dry. There had been a single radar pulse, so there must be living creatures here. To them he would represent the most instructive of victims or most deadly of menaces.

There was a snapping sound. There was a hole in the flier's cabin above his head. There were streaks of white vapor shooting on before him. There were more snappings, unspeakably venomous.

His hands broke the paralysis of shock. He dived. As he plunged toward the monstrous swells he craned his neck to see up and behind. He saw a winged thing plunging from the air above. A rocket. A small one. Its blast would

be just about right to have made the small crater beside the now-demolished tripod where Firing Plaza One had been. Perhaps it was the rocket that had landed there to examine the beacon established by the *Franklin*, when that exploring ship made the first landing on this world. Perhaps it carried away the human device and the landing plaque, with what information it could gather from a refuse pit.

But now it dived furiously after him. There were flickering sparks. Streaks of vapor shot past him, and he felt the blank astonishment of a man backward in time. He'd been ashamed to contrive so primitive a weapon as a bazooka. But the pilot of the rocket was firing a machine gun, with tracer bullets to help his marksmanship! Brett made his dive steeper. The rocket pulled out, feeling sure he was headed for a crash. It circled vengefully overhead. Its wings were small. It could not fly except at high speed.

Brett landed. The splash was satisfyingly violent, but it was actually a splendid landing in the very trough between two monstrous seas a hundred yards tall. It seemed that he had wrecked his flier in a moving, glassy-walled canon of

surging solidity. To the rocket, it should seem a certainty.

Brett waited to see what the rocket would do.

It circled and circled. It needed information about creatures like Brett. If there were any craft available that could land and salvage Brett's flier, they should risk anything to learn something of his race and kind.

But nothing happened. The rocket dived back toward the island. It sank low. It vanished.

Brett waited. His mouth was dry. He made fresh' plans. He had been detected bumbling steadily across the ocean at a stodgy three hundred miles an hour. He had made no maneuvers of evasion when the rocket dived on him from overhead. It had been Brett's absorption that allowed it, but the rocket could not be sure. The seeming crash into the sea—the whole appearance was of something which could not maneuver, in the charge of someone without skill. If they could come after him they wouldn't expect resourcefulness. He could take off at will, and straight up. He could streak at twice the speed they knew of along between the rolling swells. He could fly like a gull between the wave crests, un-reachable by missile-weapons and probably even more modem ones. He had a good chance to get away if only the occupants of the island did not have many small fliers capable of hunting him at higher speed and with greater agility than he could summon.

Floating with seeming sogginess on the water, the flier rose and rose and rose. It reached a wave crest, and Brett saw the island again. It loomed high, now. He saw large sentinel columns of stone nearer than the island's main mass. He saw the purplish seas go surging in between those columns, tilting up and foaming terribly about them, but with a tumult of water in the center remaining unbroken until farther on.

The wave crest passed, and the flier descended into the trough again. There was an enormously long wait before he was lifted up once more. He took a bearing then.

Again in the trough he used the flier's drive to move him so his craft would be in a position to be tossed chiplike between the monstrous obstacles. When the island was hidden again, he used the drive a second time. A third.

Then the topmost peak of the island remained in sight even in the waves' troughs. Brett let the flier drift aimlessly.

It was carried toward the island by the swells and by the wind. He heard the roaring of the surf, such surf as only remote islands near Antarctica experience back at home. The booming became thunderous. It became intolerable. It became a cannonade of sound that human ears could not endure. And therefore it dulled because of its deafening volume.

The rocky sentinels loomed high. They were a little less than a mile apart, but the surf and acres of foam about their bases make the gap seem narrow indeed. The flier floated in seeming helplessness toward that opening. Brett felt that acute shame which comes to a man because his body tenses and his throat dries up and his heart beats fast and his breath grows short. But his flier bobbed like a bit of flotsam on waves as high as most skyscrapers and whose troughs were deep as minor canyons. Above him loomed wave-torn, stratified rocky pillars, dripping floods of seawater, surrounded by whirlpools.

The flier went through between them. On beyond there were sheer cliffs against which the seas broke in frightful, explosive impacts with such a fury of foam and spray that the imagination was overwhelmed. Brett licked his lips. But he watched.

Then a current behind the northern column swung the flier about. Brett was, for a moment, in the lee of that huge buttress. The swells lessened. There was a vast, slow-moving eddy here. There was what could have been called a harbor, save that no imaginable ship could shelter hi it. The flier, whirling slowly as it drifted, moved toward a more sheltered spot. The more sheltered spot, still. Brett continued to watch. There were creatures here. They would want to know what queer sort of being disputed *the* possession of Thalassia with them . . .

He saw a movement among the rocks. Specks stirred, climbing swiftly down toward him. They seemed to slide down swiftly fastened cords from one shelf oi stone to another. They were coming to try to keep the flier from shattering before they could examine it, since it incredibly had survived this far.

Brett got his primitive weapon ready. The efforts of the creatures would be improvisation, of course. Nobody would normally use the sea on Thalassia! So nobody would have prepared a salvage operation such as these creatures meant to attempt.

An outward-jutting mass of stone formed a roof above the water where the flier drifted for a space, and the climbing creatures were out of sight. Brett could not make out what they were. But he reminded himself that like Halliday he had a tendency to see everything from an anthropocen-tric viewpoint. He tended to interpret moving creatures with human beings and Earth animals as references.

The current was very slow, here. The surgings of the water were less. The flier floated under an overhang so close that Brett feared it would be crushed. But then he came out. There was flat stone ahead, awash, wave-washed by trivial swells. The figures he had seen were almost at it. One did reach it and ran frantically in knee deep water to try to salvage, to grasp, at the very least and worst to see clearly inside the flier and observe its pilot.

Brett caught his breath. He did not believe it.

He stared into the face of a girl to all appearances human. She wore close-fitting garments of what looked like yellow silk, with brief drapings that had concealed the humanness of her form.

She looked at him. Her eyes widened with purest horror. Her expression was that of one who regards a frightful monster. She screamed—though Brett's still-numbed ears heard it as only a thin, high-pitched cry—and she thrust back from the flier she had seemed so anxious to reach. Other figures, also human in appearances, came running as they dropped down cords from the cliff.

At sight of Brett they howled with fury. They plunged toward him, dragging out strange weapons with which to destroy him.

Brett shot up from the heaving water at full acceleration, emergency lift, reckless of the fuel cost and with his face dead white and dazed.

He had a picture of that girl hi his pocket.

#### 4

*" . . . The arid utterly monotonous desolation of Aspasia seems to negate at once any idea of surviving inhabitants, though the possibility cannot be entirely ruled out. The Franklin cruised over all probable areas without making contact with intelligent life forms. Yet civilization did exist here. Highways still in good repair remain. It seems likely, however, that its former culture was developed in oases in its deserts, in concentrated population centers. The previously mentioned lakes of blue glass may be considered to cover the sites of such oases, melted down by fusion bombs from Thalassia . . . After this disaster it would be expected that any survivors would live only in caves or other inconspicuous places, and would hand down legends of destruction coming from the sky. The Franklin, indeed, could have been hidden from . . .*

Astrographic Bureau Publication 11297, Appendix to Space Pilot Vol. 460, Sector XXXIV. Page 61.

BRETT descended from a rainstorm to the small river before the camp cave. He'd been in the cloudbank for a period that had no particular meaning because there was never any real night on Thalassia, and he came down in a downpour that was like the heavens opening, except that he'd been up where it started. He got the flier under the overhanging trees a mile downstream from the cave, lifted it to the river bank, tied it securely and walked through the more-than-tropical downpour to where the camp had been set up.

Kent peered at him phlegmatically over a barricade of stones. He put away a heat gun.

"Oh," he said calmly. "It's you. Halliday was talking about you yesterday."

Brett rummaged for dry clothing. He toweled and shifted to other garments. He asked over his shoulder:

"Everything all right?"

"This cave was booby-trapped too," said Kent. "We should have been blown to hell when I broke down that stone wall." He paused and added. "We weren't."

"Odd," said Brett, with irony. "Halliday's in the cave?"

He was. Brett went in through the opening Kent had made. The interior was brightly lighted now. It was illuminated as effectively and as thoroughly as a museum on Earth. Cables ran along the passageways. Just inside the first entrance generators hummed. It was remarkable how the members of the Expedition had made a researcher's dream of this camp site. All archeologists have dreamed of finding an ancient city intact and of making their camp among the objects of their study. All have had wistful fantasies of laboratory facilities at the very spots where their study material exists.

Here there was exactly that atmosphere. The doubtless irregular original cave system had been worked over by the Thalassians who tried to make it a refuge for the ages. The walls and ceilings were sound. The passageways were neatly chiseled. The larger chambers were cleared of lime formations and the walls made smooth. The debris from such workings had been used for fills. It was startling to find a perfect small city underground.

Hundreds of human beings could have lived here. There were open spaces hundreds of feet across. There were halls with sixty-foot ceilings. There were even small cubicles as if for families. With bright lights and ample space and the remains of ancient occupation right at hand, this was close to an archeologist's dream of paradise. But without any inconsistency at all, it was also a charnel house. The air was sweet and clean, now, but manlike creatures had died by hundreds when the radioactive poison reached them even here. Seeping, lime-burdened water oo2ed everywhere. The smooth flat floors were covered with a glistening incrustation with minor ripples frozen

upon it. The walls reflected light like glass. Nothing that had been part of the civilization of Thalassia remained intact. There were mounds on the floors, now covered with the glassy calcium-carbonate coating, or completely impregnated with it. Sometimes brightly glazed bones appeared among these mounds. Sometimes there were the brightly colored rusted tints of metal objects long since vanished. Sometimes there was no clue at all to what the vanished objects had been.

There had been no such water seepage when the cave was occupied, of course. Cracks in the stone may have come from earthquakes—or Thalassia-quakes—during the ages since the time of death. Certainly the lime incrustation preserved everything, but only after it had been destroyed by time.

Halliday was seated by a desk which once had been packing cases. He had half a dozen ceramic objects on the desk, used as paperweights against air currents which did not exist underground. He was writing exuberantly when Brett came in.

Halliday beamed.

"Ah, Carstairs!" he said happily. "You are our lucky member! We do our work under absolutely perfect conditions, and it is your doing even if it was an accident. There are accident prone individuals, and they are Jonas on an expedition like this! But you are a favorable-coincidence-prone! I congratulate you!"

Brett sat down on a box which served well enough as a seat.

"I hear this cave was booby-trapped too."



"Yes," agreed Halliday blandly. "We smelled smoke. It was disturbing. We traced it, and there was a bomb made ready to bring down the cave about our ears. But the chemical explosive intended to bring the priming bomb slugs to critical mass had deteriorated. Unstable compounds, you know. It merely smouldered, instead of blowing us up. The Thalassians were not a forgiving type! They meant that if they couldn't live on this planet, nobody else should!"

Brett said grimly:

"The Aspasiens aren't a forgiving type either. I think it's certain the other recent visitors are Aspasiens. I found a base on the other side of the world. It would be logical for them to make a base there. Nobody else."

Halliday's eyebrows almost met in the center of his forehead.

"No! What are they like?"

"Technology about late twentieth century, apparently," said Brett. "But I'm not sure. They've rockets, chemical explosive, missile weapons, artificial fabrics and know electronics fairly well. They have good radars. Their females have high social standing,—they adventure and take risks as the men."

"Evidently the base was not occupied," said Halliday briskly. "In any case, we have our work—and plenty to work with! This was really an incredible find, Carstairs! I've completed the restoration of a skull, by the way, to the way the Thalassians must have looked in life. I'll show you."

He swung about to a shelf behind him and lifted down what appeared to be a portrait bust. He put it proudly on his desk.

"They had six fingers," he observed zestfully, "and were quite stocky of build. But they were bipeds, a little shorter than we are, they wore clothing . . ." Brett looked. He said wryly:

"You've made the ears pointed. They were like ours. And prognathus jaw or no prognathos jaw, we'd pass for them."

"How do you know?" demanded Halliday. "An Aspasian girl saw me," said Brett unhappily. "And she screamed."

He carefully related the affair of the island. Halliday protested:

"But the exploring ship saw no sign of life on Aspasia!" "Maybe they hid," said Brett tiredly. "Maybe they thought the *Franklin* was a Thalassian ship, built by some who'd managed to live through, as they did. Maybe for that exact reason they came over to Thalassia to fight it out here: to end the danger to their race forever. It looks like that. I thought they'd be even more anxious to track me home than to kill me, so I found a storm cloud and stayed in it till it came ashore, and I came down to camp here with the rain."

Halliday winced. But then he said hopefully:

"Very wise! Very! But we are very well hidden, and this is a very large world. And we've not much to fear from creatures with no more than a twentieth century technology."

"Unless," said Brett, "they've got twentieth century desperation. I suspect they are desperate. I think they're ready to fight to the last creature among them to kill every one of us. I think they'll hunt us as we'd hunt the devil himself—which is what they think we are!"

There was a shouting at the entrance to the cave. It was Kent's voice. Among the echoes, the words were indistinct, but Brett thought he might have called something about a rocket. He shouted again. Halliday got up and walked briskly toward the sound.

The floor of the cave bounced violently. The lights went out. There was a crash like the end of the world, which lasted for a long half minute. In the cave, things fell. Walls creaked. Sections of roof plunged down with thunderous impacts.

Then Kent's voice sounded in the abysmal blackness.

"I heard a rocket blast in the rain. I yelled. Then the bomb went off." His voice, usually toneless, quavered a little. Then he got it under control. "It was downstream, about where we keep the fliers, around the curve in the

river bank. Lucky there is high ground between. But I saw the light. Atom bomb." Then he added calmly, "The shelf of rock fell down. We're buried in here."

Halliday rose to the emergency in his own manner.

"Somebody bring handlights and a counter," he snapped. "See if anyone's hurt!" Then he said irritably, "If they're Aspasians, they used cobalt bombs once. I hope they haven't used one now!"

But they had. Handlights came from the place where the supplies were piled. The spreading shelf outside the camp, which had sheltered the cave entrance like a remarkably deep portico, had cracked from the ground shock and its outer edge tilted down into the water of the river. There was a rill which ran underneath it from its upper edge, and ran out again down below. A geiger counter showed radioactivity. Not much yet, but some screens between the

counters and the water identified the radioactive material. Cobalt-60.

Halliday's voice cracked with exasperation. A cobalt-based bomb had been dropped within a mile of the cave entrance. Obviously, Brett's idea of hiding in a storm-cloud hadn't been good enough. When he landed, a bomb dropped. It indicated much better than twentieth century technique. It even looked as if it hadn't been intended to shoot him down when he approached the island, but only to scare him back home. But when he'd seemed to crash they tried to learn something from the wreck. Yet they'd been pleased when he got away. This was the result.

"We seal up the cave entrance," snapped Halliday angrily. "We cannot go outside! But there is air within which will not be contaminated immediately. We will think it over."

Brett helped shovel wet earth to fill the solitary entrance to the cavern with an airtight plug. He raged to himself at the disaster he'd brought on the expedition. He'd been sure that he'd evaded all possible trailing. There had been no radar! Could they have trailed him with infrared? It was late twentieth century too. There was no way to frustrate that sort of trailing . . .

The Expedition was doomed. Much worse, in six months a ship would come from Earth for its members. That ship would not expect attack. It would be an easy target for the creatures whose ancestors had destroyed all air-breathing life on his planet, and whose descendants were bent upon extermination of the Expedition. They'd smash the Earth-ship. They'd study it. They'd make a fleet of interstellar ships themselves. And, having fought one interplanetary war, they would never risk war against a warned adversary. They'd strike with absolute ruthlessness and ferocity at any other race that could endanger them . . .

When there was a completely adequate seal filling the cave entrance, Brett reflected with a sort of sickish cynicism that history assuredly repeated itself upon Thalassia. Eight thousand years ago, humanoid creatures had sealed themselves in this same cavern, hopelessly wanting to secure life for their descendants. They'd failed, and their bones lay all about its corridors. Now a dozen humans had sealed themselves in, making the same foredoomed gestures. But they'd have no descendants to try to avenge with booby-traps.

He leaned against a passage wall. That girl would rejoice fiercely if she knew. Maybe she'd been hi the rocket that had dropped the bomb. Whatever her ancestry, she came from Aspasia and she had imbibed hatred of Thalassia with her mother's milk. Thalassians, for that matter, set booby-traps to implement their hatred even after their deaths. The two races had the unforgivable to avenge—near extermination and eons of hiding in the one case. Extinction in the other. There was no way to parley, to explain. There was no way to do anything but die.

Because, of course, outside this sealed cave the rain poured down, washing the deadly radioactives of this last bomb down into the earth itself. Already, to take two breaths aboveground was to die. But presently deadly ground water would come down to this ancient shelter and this cave would again become a lethal chamber. But it was a large one. After a little, Brett went heavily to the futile conference Halliday was holding. The cave lights were still out, and only handlights illuminated the scene. Halliday gesticulated, his thinning white hair stirring as he moved.

"Where's your floor plan, Morton?" he cried angrily. "The floor plan of the entire cavern! You should have brought it! This is irritating enough, without members of the Expedition acting like helpless school girls! Go get it! Janney! What is the weather outside?" He raised his hand peevishly. "I know it is raining! What is the wind-direction and speed?"

Janney said heavily:

"The wind's onshore. Naturally! I told you yesterday that a trade wind blows! Of course in a rainstorm it loses force. It probably blows fifteen miles an hour, with gusts up to thirty or more."

Halliday clapped his hands sharply:

"Understand, everyone! We cannot stay here. We cannot go out of the ordinary exit. We have to find a new exit, or make one. I believe the rock-strata slant down toward the coast. Am I right, Simpson? Yes! It is probable that some of the sealed-off branches of this cave system may reach the surface—or near it—upwind of the bomb crater. They

would have been sealed off because they communicated with the air. The seals are to be broken and radioactivity checked in the air coming in . . ." Kent spoke, phlegmatic as always: "Make up packs to carry?"

"Naturally!" snapped Halliday. "This is a most irritating occurrence! We had a perfect site for examination with all conveniences. Now it must be abandoned and it will not be possible to examine it again for years! Everyone should carry his written notes, but artifacts will have to be left behind to leave room for food. It is infuriating!"

He fumed, but Brett found himself admiring Halliday. The dark and echoing caverns resounded to strange noises, after that. The strangeness was largely due to the blackness which is not normal anywhere on Thalassia. Men examined carefully drawn maps, and found sealing-off walls which blocked extensions of the cave system. All limestone caverns are somewhat similar. One passage might have been blocked off because of a pothole leading to the surface. Another because of an underground stream which would bring radioactivity in its waters. The geiger counters gave grim news as one after another of the seals were broken. There had probably been only one rocket at a time trailing Brett's flier, from so great an altitude that he could not detect it. A rocket has not an indefinite flying life. There must have been a relay system to keep on Brett's track. But there'd been a cobalt-based bomb handy to drop when he went to ground. It would normally have made a continuous lethal fallout over a strip of ground many miles long. In a rainstorm like this, the fallout should be shorter, but vastly more intense. It was. Air coming in the pierced walls that closed off unknown winding passages showed an intensity of radiation that made Belmont whistle softly.

"Right now," he told Brett, "the air outside is just about as breathable as so much straight chlorine. It wouldn't be as painful to the lungs, but the results would be identical." Brett helped close up another small opening with mud. Twelve men from Earth, hundreds of light-years from home, were sealed in a cave that had been a tomb for eight thousand years. Unknown stars made speckles of light to the thin blue sky above the fainclouds. At one place a nearby star cluster made a mottled illumination brighter than the local sun. They were on a world of water with but a single continent of land and that was empty of moving life. There was life only in that hopeless cavern underground—and high in the air overhead, hovering until more hovering things should come to drop more death.

Beyond the atmosphere there was nothing at all. From a sufficient distance the globe which was Thalassia could be seen to be distorted, bulging noticeably toward its similarly deformed twin world Aspasia, only a quarter million miles away. They revolved about each other in implacable enmity, turning always the same faces toward each other.

A long, long way away there was the yellow sun Elektra, spinning in space, less bright than Sol but nearly as large. Nearer, and rolling sullenly about its primary was the red dwarf satellite-star Rubra. The twin worlds followed it perpetually in its orbit in the Trojan position. From space the dark carbon clouds could be seen upon its surface, forming in perpetual storms through which the fiery red of hell flame could be seen. Further out were more planets, Lucifer and Titan and Argos, giant gas worlds where Life had never been. And spinning brilliantly in the glare of Elektra, close in toward it, blazed the little planet Melissa on its erratically inclined orbit, circling Elektra in a year of less than a dozen weeks.

But there was not quite a sameness and a staleness in all the happenings of empty space. Where the twin planets spun about each other there was motion. It was tiny by comparison with the vastness all about. But from the seared and sandy surface of Aspasia small white threads appeared. They stretched toward Thalassia across the gulf. There were many of those threads. They were rocket trails.

The enmity between the planets had not ended. A war fleet roared toward the world that robot rockets had killed before. Life had been found on it again. That life must be destroyed.

The strange, incurious stars watched without emotion.

## 5

*"On Thalassia plants no longer seek to attract insects by bright colors or scent or nectar, because there are no insects. Plants which depended upon insects for fertilization have become extinct. Berry-bearing and fruit-bearing trees no longer compete for the carrying of their seeds by offering fragrance or taste. There are no birds. Even species which formerly found it advantageous to grow thorns for the discouragement of herbivorous animals no longer find the practice serviceable. . . . The flowers have lost their scent and the fruit its savor and even the thorns their sharpness, because there are no animals to take notice . . ."*

Astrographic Bureau Publication 11297, Appendix to Space Pilot Vol. 460> Sector XXXIV, Page 75.

THE SOUND of the surf gave them hope—that and the geiger counter readings. They climbed and crawled and wormed their way through channels and around glistening-wet bulges of stone. They had ropes around their waists like mountain-cumbers, so that no one would fall alone into the sometimes gaping depths they encountered. Once Brett, in the lead, crawled upon his belly for more than a hundred feet with rock touching his back all the way. He could not have done it but for the assurance of the rope that he could be pulled back. Once they had to use a small charge of explosive to break down a mass of calcite which barred the way. They spent hours in the journey. But they went on because to stop or turn backward was to die. And for the last half hour they did have the encouragement of the thunderous sound of surf.

Then they came out quite undramatically from a hole in which there were many brushwood sticks, in the space between the roots of a giant tree. They heard the surf clearly, then. They had crawled more than five miles underground, and were almost at the edge of the beach when they reached the open air.

The jungle which here crowded the shoreline was saturated, but the rain had stopped. They moved in the direction that by convention was called south. A magnetic compass pointed somewhere, and steadily, but it bore no relationship to any astronomical phenomenon and they could not take it seriously. When they moved south, they moved along the shoreline toward their first camp and the shattered Firing Plaza Number One. It was not an especially sensible direction to choose, but they happened to have come out on that side of the river which ran before their late cavern. They needed to get away from there. It was doubtful whether it would be wise to wade a stream that ran through cobalt-contaminated ground.

"If I read our enemies right, now," said Brett grimly to Halliday, "after underestimating them before, they'll blast all the area around my landing place as soon as they can get bombs here. But it's been a long time already."

Then he considered, and said more grimly still:

"I imagine that I had a rocket with a bomb on board, trailing me all the time, all the way back from the island. The rocket changed from time to time, but always there was a bomb ready. Yet after I did land, the pilot had to putter around in the rainstorm a while before he could find out just where to drop the bomb in order to have it land accurately without endangering his own craft. If they went to all that trouble to track me home, they'll really go to town on the place I landed! Right?"

Halliday was hiking, with all the others after him, to get away from the neighborhood of the camp. Well away.

"They'll bomb the surface of the ground," added Brett, "to knock in any caves or other installations we may hide in. Then I think they'll use some waterburst bombs to make sure that everything dies—nothing being supposed to be alive—in the biggest area they can imagine us as being in. It sounds extreme, but I think they'll do it. They mean business!"

Halliday nodded and continued to hike. Janney, behind him, said:

"There's no day and no night, and the trades blow all the time. But the trades should pick up a little after Elek-tra rises. More heat. If they want maximum spread of their radioactives, they'll wait for that. They ought to think us pretty well smashed."

"We will move slanting inland," said Halliday, irritably. "There are mountains. There could be updrafts<sup>1</sup> on the slopes to carry even atomic fallout over our heads."

Brett said no more. They toiled through the forest. There were places where the underbrush was thick, and they moved at a snail's pace or worse. But there were other places where gigantic solemn treetrunks rose from shadows so deep that there was heavy twilight and no undergrowth at all. The rain had ended so recently that all trees still dripped. But there was one variety of tree which seemed somehow to gather up water in its broad leaves as if they were cups, then released it all at once. Brett never knew the mechanism, but there were times when water plunged down in coherent masses of gallons. When such a mass of water hit a man, it could knock him down. Sometimes it did. At all times the ground in such shadowed places was practically mud, which clung to their feet and made walking heavy.

Brett found Kent struggling along beside him, phlegmatic as always. Brett said dispassionately:

"If they land and try to track us down on foot they'll have an easy job of it! Look at the trail we're leaving! If they have dogs, we'll be finished! They'll find us!"

Kent's features lighted up. Brett had never seen him so animated before.

"Dog," said Kent pleasedly, "that's something I know something about! Look here! You say it's desert on As-pasia where these creatures after us come from?" "That's right," said Brett.

"Then they'll have dogs or something similar!" said Kent in happy authority. "That I know about! You take a savage who hunts with weapons—he'll have to start as a hunter to get the idea of weapons with tools coming later. When he lives in a jungle, he lives by stalking. A dog's no good for stalking! You can't train an animal to keep quiet while his prey blunders nearer and nearer and then changes his mind and walks away. A dog's for open-country hunting. You see? He's to run ahead and bring the hunted creature to bay, and dance about him, barking, until the man comes up and kills the beast. Where you find open country you find dogs. Deserts, too! The Arabs used to have wonderful dogs! So the creatures of Aspasias would need dogs before they got civilized, and they'd keep them after. We did!"

Brett went through a pool of water. Everybody had to wade through that pool.

"Suppose the Aspasians run faster than their—ah—dogs?" he asked drily, though he knew better. He was not able to believe that the girl he'd seen on the island, and whose picture was in his pocket, was an Aspasian. The evidence was past questioning, but he couldn't accept it. "Suppose they could run as fast as their prey?"

"Then they'd never get civilized," said Kent promptly, beaming, "Nobody gets civilized unless he gains by it. Unless he needs to! If our ancestors had been able to run down the creatures they hunted, they'd never have bothered with more than clubs. We'd be trotting after rabbits back on Earth, you and I, instead of being here. Eh?"

"I never thought—" Brett stopped.

The ground quivered underfoot. A distinct, unsettled quivering. A tree branch snapped somewhere and came crashing to the ground. The marching party of twelve men stopped and listened. Long seconds later the sound came. It was a crashing, horrific roar. The leaves quivered overhead and a shower of water fell down from among the boughs.

"A bomb," acknowledged Halliday, looking up from his wrist chronometer. "But well away." He added firmly, "A solid ground burst. They will bracket their first bomb crater on all sides. Then they'll drench the area with radioactives from sea water. We will go on."

He led on. Brett trudged after him. Half an hour later there was another bomb. The delay was almost proof that Halliday had been right about the solid ground aspect. A bomb to be aimed for a particular spot had to wait for the radiation cloud from a previous bomb to clear away, so it

**could be aimed.**

Four times, as they struggled through the forest, they heard the detonations. If some Thalassian hideaway had brought survivors through the years of poisoned atmosphere, and if descendants of its original occupants had at long last come out to the light of day—why—that bombing should

end any chance of further emergings. If in addition an area miles wide and deep were made uninhabitable by spray—then all danger of the return of the life to Thalassia at that place would become unthinkable.

The men marched on. Hours passed. They began to lag and stumble when they reached the foothills inland. There Halliday allowed a halt. They had come fifteen miles, nearly, from the place where the cave branch ended. They were worn out.

"But we do not know," said Halliday precisely, "what our enemies' plan will be. I expect the cobalt contamination of a considerable area. It has not happened yet. But we must go on."

Yet he allowed a rest. Brett regarded the packs each man had made up from himself. There were oddities. Belmont carried four geiger counters and their power packs. The packs were negligible in weight, but the utility of geiger counters to fugitives on Thalassia was debatable. Janney had his thermometers and his barograph—Brett saw him winding it—besides a heavy notebook and his food. Another pack included two cameras and an absurd load of film. There was a neat assortment of insulated wire strapped to another pack still, and a tiny pick and whisk for uncovering archeological specimens . . . Every man in the Expedition had brought along something representative of his specialty. But Brett doubted that there was a saw or an axe or a good-sized knife in the company.

He himself was carrying his reproduction of an ancient bazooka, and his pockets were stuffed with the one-inch plastic rocket shells he'd made for it to fire. Since there were no living animals on the planet, and their enemies were armed with atomic bombs, he was no more rational than the rest.

After a tune, Brett moved up to where Halliday sat limply on the ground. Halliday was probably the oldest man of the dozen, but he had forced the pace until even the younger men were weary.

"I still feel disgraced," said Johnny, "but I wanted to ask you something."

Halliday said sharply:

"I authorized your journey to the island, and I told you that I considered the manner of your return quite sound. If there was a mistake—and there was!—I share in it. But what do you want to ask?"

Brett hesitated, and shrugged.

"I suppose it is, whither are we drifting? We've got six months to wait before a ship comes for us. When it comes, it will probably be attacked, and we've no way to warn it. We haven't more than a ghost of a chance of living six months, for that matter. I'd just like to know if you have any plans for our survival and ultimate rescue."

Halliday sputtered. Then he said, in irritation:

"Carstairs, there is a time to act and a time to plan! At the moment, we need to act simply to gain time to plan! I have no plans for survival for the moment. I do not have plans as yet for contact with the rescue ship when it comes. But I have months in which to think them out! I shall deal with it in due order of importance. The essential thing at this moment is to get out of the area those Aspasians are going to drench with sea spray! We have, to be precise, to get them off our tails so we can take measures for the future!"

Brett smiled warmly at the older man. Halliday was bluffing, but it was a good bluff. Brett liked it. He said:

"I was just talking to Kent. Putting myself in the enemy's place."

Halliday's eyebrows rose.

"Well?"

"If Earth's old civilization had been smashed from a planet as—say—Thalassia," said Brett, "and we'd managed, we thought, to wipe out the Thalassians: and we'd built up our culture again but were still scared of them, so we made a journey across space to make sure . . . If we found creatures on the planet that we thought were our old enemies, we'd do exactly what the Aspasians have done. We'd hate them like the devil! After we'd trailed one home and bombed him, we'd drench the place with radioactive sea spray. But just to make sure, we'd do one thing more."

Halliday said irritably:

"Come to the point! What would we do?"

"We'd send home for dogs," said Brett. "And we'd go around the outside of the area we'd made deadly, and make sure that our enemies hadn't come out on foot. We'd know they hadn't flown out. But the dogs would tell us if they'd walked out."

Halliday stared. Then he groaned.

"Carstairs! You drive me mad! You think of things! There is no reason to suspect the Aspasians of having dogs! But it is so infernally possible that they have! It would be like them to poison the air of a world, and then go home and play happily with pet animals! Of course!"

Brett said hurriedly:

"The only thing is that since Aspasia is mostly desert, it's not likely they'd have much experience of following a scent that was faulted by running water."

"Go away!" snapped Halliday. "And don't come talking to me unless you think of something else."

In ten minutes more he rose and summoned the party to further journeying. The pause had seemed to stiffen unaccustomed muscles, but they started off. In twenty minutes they came to a small stream. Halliday faced back.

"We walk in this brook," he said peevishly, "in case we will be trailed with scent-trailing animals from Aspasia. No one is to put foot on dry land under any circumstances!"

He led the way downstream. Two miles, and the brook was joined by a slightly larger one. Halliday turned and traced it back toward its source. He was followed by the line of burdened, weary figures, splashing in his wake.

An hour later the ground trembled underfoot. They were well up in the hills, then. They looked. An enormous column of darkness still uncoiled toward the sky. It was very far away. It spread to the familiar mushroom shape as they stared. It would be thirty thousand feet high, on this planet of less-than-Earth gravity. Its stalk was sturdy and thick. It was a water burst bomb. Janney glanced at his wrist. He'd been right. Elektra would be rising.

Halliday went on. And on. And on. The ground shook again. Later it shook still and again and again. There was a wall of gruesome darkness against the sky. It loomed many times higher than mountains. They were looking at the row of dark though unsubstantial giants when a seventh column arose.

They went on. They climbed and waded and climbed. They came to a narrow pass between two mountain flanks. A stream gushed out of the mountainside and fell forty feet and then came splashing down among stones.

It wasn't the end of their watery highway. There was a pool below it. There were two streams flowing from the pool. They had followed one up to this spot. Now they followed the other down to the other side of the mountains.

But the atomic cloud was moving inland. They looked up behind them, and looming far above the range they had crossed there was the misty forefront of the cloud of death. It was composed of water vapor lifted up for miles and blown to droplets and those blown to smaller ones until it was the thinnest of fogs. But deadly.

Halliday stared pugnaciously up at it. Then he chuckled.

"Gentlemen," he said with a jerky gesture, "there is an omen if you happen to be superstitious. I advise it in this case for the pleasure it brings. Elektra must be above the horizon, though we cannot see it for this next range of hills. But its light strikes the atom cloud. And—do you not see a rainbow?"

It was not a very good rainbow, but it was there. It was strong in the red, and lurid in the yellow, but the blue was deficient. Still, it was a rainbow.

When they halted for the equivalent of a night's rest, Halliday called Brett to him with a crook of his finger.

"Yes?" said Brett.

"I appoint you," said Halliday firmly, "to work out a plan. You irritate me. You think of things. Now I assign you a thing to think of!"

"I'll try," said Brett. "What is it?"

Halliday puffed a little. He was not a young man. He was exhausted. But his manner was dour and irritable as always.

"I think we are clear for the moment," he said peevishly. "If that atomic cloud will only settle over the trail we left, so that no misbegotten Aspasian can take any equivalent of a dog and find our footprints before we began walking in stream beds—If that happens, they will believe us dead."

"They should," agreed Brett.

"But," rasped Halliday, "it will not follow that they will think they have killed all Thalassians—such as they think us—hi killing us few. They will hunt this continent over. They must be firmly convinced that we are devils and resolved that none of us must stay alive. They hate us as we hate the devil!"

"It looks like it," admitted Brett. "After all, they've only seen one man—me."

"Yes," snapped Halliday. "There is only one answer. Put your mind on it. Find some way to make friends with them!"

## 6

*" . . . The continent Chios is . . . the only considerable land mass on the planet. It is thickly covered with vegetation, and its former inhabitants must have had cultivated crops and very probably a dense population. However, its constant daylight negates the idea of the introduction of Earth plants, and the poor flavor and indifferent quality of such edible plants as are known makes subsistence on its native products a far from attractive prospect. In case of emergency, nourishment will be found . . .*

Astrographic Bureau Publication 11297. Appendix to Space Pilot, -Vol. 460. Sector XXXIV. P. 80.

THERE WAS no night or day upon Thalassia. In theory, at this particular part of its year the sun Elektra rose from somewhere along its southeastern horizon and for not quite one hundred and fifty hours crept upward in the eastern sky, and then for the same length of time descended slowly toward the northeast. As it set, the star cluster Canis Venitici rose in the southwest and rose for a similar number of hours and declined for the same to the northwest. At other seasons these directions were reversed, and there was also a time when the sun rose due south and set due north. Then there were eclipses. All of which resulted from the fact that Thalassia and Aspasia revolved about each other once in twenty-five days (Earth measurement) with their common axis in the plane of the ecliptic, and had no diurnal rotation at all. But the important thing was that Thalassia had no clear-cut day and night.

Wherefore time passed confusingly. The twelve who had come to study the fallen civilization of the planet had become fugitives, without hope. They had no shelter, only such food supplies as nourished without satisfying them, and no prospects of any improvement.

They did know of some few coarse fruits which could be eaten, and there were half a dozen varieties of fresh water fish that were not unwholesome. The absence of fruit-eating birds or animals had resulted in eight thousand years of lack of natural selection and had produced part of this situation. The fresh water fish were mostly recent adaptations of marine forms which had moved into the ecological niches left when the brooks and rivers of Chios ran deadly poison down to the sea. Eating grew monotonous for the twelve who hid.

There was no alternation of day and night. It seemed to Brett that their purposeless migration went on for years. They marched until they were tired, and lay down and slept, and got up and marched again until they were tired. They grew whiskery and unkempt, they loathed the food they had to eat, and all ideas of tune lapsed in the unending day.

Objectively, they crossed a wide valley and came to an inland mountain chain, and followed that southward. Nothing of any consequence happened at any time. Once they saw a spot where an obvious bomb crater had been blasted into the side of a mountain. It made a gigantic scar which even eight thousand years had not healed over. But that discovery, like all others, had no meaning.

Then, one day—one march—one period in which they were all awake—they came to a broad valley which would surely have made a perfect location for a city. And it had been. The center was gone, blasted flat and covered with

jungle. But about the edges of the obliterated blast area there were crumbling structures of stone. There were tumbling walls, and terraces distorted by tree roots, and other matters of that kind. The Thalassia-Aspasia Expedition could not resist the lure of it. They carefully did not talk about the complete hopelessness of their position, but here were ruined artifacts and structures, and they yearned over them.

They stopped to dig, and poke, and pry, and measure, and zestfully to dispute with each other over the meaning of this architectural feature and that. It was not a reasonable thing to do, but there was no purpose in being reasonable.

Brett Carstairs could not join them. He could deduce the technical processes of former years, but there was nothing for him to work on. He tended to brood over the futility of all things. He brooded also over the danger to humankind if the ship that would come presently for the Expedition were smashed by the crew that had driven the Expedition into the wilds. And there was the girl. Her existence was patently impossible, and definitely



undeniable. She must be fiercely rejoicing hi the conviction that he had been killed. And Brett looked at her picture and did *not* rejoice.

They hadn't seen a living thing since leaving the coastline. They never should, unless they were discovered. Then they might see the Aspasians who would destroy them. But Brett brooded, while the rest of the Expedition climbed and crawled and zestfully investigated the ruins of a shattered suburb of an obliterated city of Thalassia. The second day of that pastime, they saw a ship of the enemy. It was a new type ship, and it was evidently hunting for signs of living things to be killed. It was not a rocket, this time. Rockets move fast, but in atmosphere they are not economical of fuel, and on Thalassia afi fuel\* had to be brought across space. So this was a new type ship.

Brett discovered it as he sat drearily brooding and wondering how on Thalassia Halliday could imagine making friends with creatures who considered them devils out of hell, or worse, who must be killed at any cost. The ship came into sight above the mountains.

It was melon-shaped, with pointed ends. Its round sides glinted silver. It moved very deliberately indeed, almost hovering. There were ports along its bottom, but not elsewhere. It moved by occasional jettings of rocket fuel from astern.

Brett called sharply, and men passed the word. Within seconds the personnel of the Expedition were invisible, hiding behind bushes and trees. Brett slipped down to join them where they stared at the vessel hungrily. They were a disreputable crew, now. Nobody shaved. They did not look like a scientific group. Not at all.

"It's a space ship all right," said Kent phlegmatically. "But is it ours? Is there an Earth type like that?"

Halliday snapped:

"Human spacecraft aren't streamlined. No sense in streamlining for emptiness. That's an Aspasian ship. Hunting us!"

Something teasing and vague and annoying tickled the back of Brett's mind. He knew something, but he didn't know what it was.

"Now why," asked Janney, "does it use rockets? Rockets won't move a mass like that! It must be two hundred feet long! Thousands of tons!"

The rockets of the ship flared again. Brett saw a long cord dangling from its forward end. Why should a space ship have a cord dangling from its bow? It moved visibly faster when its rockets did fire. No rocket could visibly stir a mass of thousands of tons, such as a two hundred foot space ship. No such small rockets as this, anyhow!

The ship approached the mountains.

Its bow suddenly whipped around all of ten degrees, and then slowly swung back. Then Brett noticed that the ship was not moving along the line of its own axis. It did not progress precisely where it pointed. It also moved a trifle sidewise, as if something pushed laterally against it while it forged ahead. Which was impossible hi a space ship weighing thousands of tons. . . .

Then the fact clicked hi Brett's mind. He cried out.

"They are twentieth century technologists! That's no space ship. That's a dirigible!"

Halliday blinked. Brett's words almost tumbled over each other:

"It's a balloon, Halliday! It's a bag filled with helium,

and pushed by a rocket! An old, forgotten way of traveling by air! It was in use for less than half a century! They don't need motors to stay aloft! They float! The Aspasians have sent for them because they don't have fliers!

They use these dirigible balloons at home, and rockets for space travel! Now they need to make an exhaustive hunt, they sent for these! I have lived to see the day when a balloon was used again . . ."

Things fitted together with precision. Aspasia was a desert planet. Fliers would never be developed in a desert area, of course. Their motors would be unreliable, at first, and over desert a failed motor would mean a dead passenger. But balloons would float on, even if their motors failed, until some inhabited area was reached. Of course! On Aspasia fliers would never get through their primitive stage. Balloons would be preferred, not

because they could be carried closer to perfection, but because they were safer while still very far from it! Of course! To make a painstaking, inch-by-inch search of a continent, the Aspasiens would import these balloons, and they would be effective.

The silvery, melon-shaped object rose and fell in a wind gust past a mountain peak. The rockets jetted furiously and it climbed against the wind and went over the mountains and away. Brett racked his brains for details of this forgotten mode of transportation.

Next mealtime his idea came to him. The food was even less appetizing than usual. There would be food in that dirigible balloon. It would be the only palatable foodstuff in hundreds of miles.

He led Halliday aside.

"I propose a gamble," he told the Expedition's leader. "It could get us all killed. Or it could get us something we could probably eat. Or—it might be a way to make friends. Do you want to take a chance?"

"Probably," said Halliday, frowning. "What is the idea?"

Halliday was emaciated, now. The food and the journeying on foot had not been good for him. But he was still the leader.

"The firing plaza was booby-trapped," said Brett persuasively, "and the cave. So this city's probably booby-trapped too! Now, if we can only make sure . . ."

It was a hairbrained scheme. It was not at all the sort of project that would be authorized in a sombre policy conference before an expedition set out from Earth. One had to be desperate and half-starved and practically without hope in order to conceive of it. But Brett made it sound remarkably plausible. At that, however, Halliday pointed out that it might not work but simply lead to an unbearable concentration of search just where they were. But he approved it.

So Belmont abandoned archeology and went over the center of the city with his geiger counters. The man who'd brought insulated wire with him, because he wanted to, made investigations. Eventually he contrived an induction balance. With that and knowledge learned from the booby-trap in the cavern which had not gone off, he determined facts about arrangements under the ground that had not been disturbed for many centuries. There were four bombs underground. It should be possible to set them off . . .

The Expedition became feverishly busy up on a mountainside. The electronicist constructed an object of wire strung on sticks cut from small trees with pocket knives. He proudly detailed the mathematical principles involved in the reflection of a tight beam of high frequency electricity. A communications man magnificently took a hand-light—brought nobody knew why through the perpetual day of Thalassia—and used stray objects from the pockets of the others to make a generator of microwaves out of iron particles and vegetable oil. It strongly resembled the apparatus with which Hertz first demonstrated the existence of electromagnetic radiation, in the nineteenth century. The handlamp battery, of course, would give some hundreds of watts power for a few seconds only.

Then the Thalassia-Aspasia Expedition devoted itself to the project of building the largest possible stock of dry branches and brushwood. Twelve men worked at it for three days. They planned, indeed, as if for a forest fire. When the time came, Brett set light to the key area and made for the mountainside. He was halfway there before the brush fuse burned to produce an appreciable quantity of smoke. Then it abruptly began to pour out thick, curling masses of brown vapor which was not supposed to rise from the surface of Thalassia, because there should be nobody living there.

When he reached the ledge on the mountainside where the Expedition waited, the whiskery and disreputable-seeming characters were fairly dancing with excitement. But for a long, long time nothing happened. Smoke rose up in a column toward the sky. It was visible for a very great distance indeed. But nobody came. For two hours. Then Halliday fairly squealed in agitation:

"There's a ship!" he cried. "They saw it! It's coming!"

From far over the mountains a ship was coming with jets of rocket fumes behind it. It bounced hi the wind currents of the mountains. It came nearer, and nearer and nearer. It arrived at a point five miles from the brushwood fire. It swept around to see it from upwind, nearer where the Expedition hopped and squirmed in its agitation. It was four miles from the mountain flank and still coming. It was midway between the Expedition and the blaze which now covered half a square mile of jungle.

"Try Booby-trap One," commanded Brett eagerly. "If it misses try the rest hi turn! And don't look—"

The members of the Expedition sank down behind sheltering boulders. Brett, himself, ducked to where he was sheltered from direct sight of the booby-trap area, but where he could still see the bobbing airship. Brett shielded his eyes with his hands against possible flashing of light.

The electronicist at the tight beam projector ducked his head and stabbed twin wires together. There was a sharp, harsh, buzzing sound. Down hi the valley where the induction balance had said a bomb lay buried, a beam of high frequency radio waves hit hard. They were very much like the waves a tripod beacon had given off at Firing Plaza One. They induced high frequency currents underground. There was the fierce bright light of the dawn of time, with all the cosmos turned incandescent for an instant. The ground rose up and bumped Brett fiercely. Then there was a sound as of doomsday, and rocks and pebbles rolled and clattered down the mountain flank.

Brett saw the shock wave of the explosion hit the dirigible. It was not a sound wave, but an expanding sphere of pure compression. He saw the silvery, seemingly solid

metal but actual cloth bag dent in, exactly as if pushed inward by a giant thumb.

Then the balloon popped like a rubber toy.

The atom bomb cloud rose and rose to the high heavens. It formed a mushroom shape. But the tradewinds blew over the mountain tops as over Thalassia's sea. The cloud curled and curved, and lightnings flashed and thunder rolled in it. But it would go away inland, too.

The Thalassia-Aspasia Expedition plunged down the mountainside hi a yelling small horde before the balloon had reached the ground. It was a remarkable descent for the balloon, at that. Its bag had been burst *in a* single monstrous rip, but it did not crash headlong. As the whole object plummeted, the bag material caught in the stiffening framework inside its former hull. It acted, though inadequately, to check the fall. The balloon reeled and swayed because of that parachuting action, and it crashed into the branches of a great tree, and after a fashion skidded out of them, then landed in a tangle of splintering brace members on the ground.

Brett lost sight of it as he plunged down with the reproduction of an antique bazooka hi his hand. He used the bazooka as a staff, hi his haste. Then he ran, and so did all the others until, panting, they came hi sight of the debris.

But they saw something more than debris. There was the brightly clad figure of one of the ship's crew on the ground. Another figure worked furiously, not at the spilled-out body but at something caught in the splintered framework. It came clear. It was a ball of considerable size. It loosened and came free as if it had been designed to be dropped. The straining figure pushed it fiercely until it was near the prone figure on the ground. Then the laboring stopped, and that crew member stared desperately at the sky, and then fiercely all around.

Halliday groaned between pantings.

"An atomic bomb!" he gasped. "They'll set it off—to take us with them—"

Brett raged. Then he heard his own voice shouting:

"Spread out, everbody! Show yourselves but don't go closer!"

The figure heard his shout. It whirled upon him. It saw

him and his companions. But they stayed behind. Brett would have shouted again, but that his breath had left him.

He walked on, swallowing, his reproduction of an ancient bazooka dangling hi his hand. The figure by the object that must be a bomb—was a girl. It was the girl whose picture he had hi his pocket, or at the least her identical twin. She regarded him with a terrible fierceness.

Brett walked forward, trying to get his breath back and his mind straight. He'd thought of food, but now he thought of something else. The figure on the ground stirred feebly. It turned its head. It was a man. Human. Bearded. Bearded! This particular situation was agonizing. In inherited, acquired, instinctive, legendary, and religious hatred of all things Thalassian—because of what Thalassia had done to her world aeons since—this girl was hungrily ready to set off that atom bomb. She would die in its flame, but so would Brett. At the moment, the other eleven members of the Thalassia-Aspasia Expedition might not. She waited in a terrible impatience for them to come closer.

Brett stopped. She moved toward the bomb, turning only to regard him with eyes that seemed to flame. She reached out her hand.

And Johnny did the only possible, the only obvious and inevitable thing. She was about to detonate the atomic bomb that had been the ship's sole armament. Because hi so doing she would surely kill one individual she considered a Thalassian. Her own life was a, cheap price to pay for that achievement, and she might bag the others too. She moved to detonate the bomb.

Brett blew it up.

His action was instinct, but also it was sound sense. Because an atomic bomb contains remarkably little explosive. It is different from all other bombs hi that what explosive it contains exists only to move slugs of fissionable material into a critical mass which then detonates. There is no atomic explosive unless there is a critical mass. Until it is actually fired, an atomic bomb is a rather delicate piece of mechanism only.

Brett's bazooka-shell hit the case. The rocket fuel hi the shell blew. It smashed hi the case. It jammed the delicate mechanism. The actual explosive hi the bomb flared smokily, but it was not even enough to singe the girl beside it. Brett plunged forward and grabbed her before she could take any further measures.

There was great confusion, then Kent came to Brett and said phlegmatically:

"That whiskered man's got a broken leg. Better set it, eh?"

"I would," agreed Brett. He stared at the girl, both of whose wrists he held firmly. She returned his gaze with eyes which had ceased to burn as flames, and now were rilled with an absolute, stunned astonishment. Halliday came up a little later.

"Carstairs!" he said irritably. "That man with a beard —He is a man, isn't he?"

"I hope so!" said Brett with deep earnestness. He continued to look at the girl. She opened her mouth to catch her breath in purest bewilderment.

"He's been pulling our beards!" said Halliday angrily. "He seemed astonished when we set his leg. He almost fainted when he counted our fingers. I can see that! We've got five fingers and the Thalassians had six. But why the devil should he want to pull beards? Every one of us, separately! He can't seem to get over the fact that we have five fingers and grow whiskers! He's got a beard!"

"Maybe," said Brett, "the Thalassians didn't have beards. Which may be why he wears one. Maybe—111 see." Gently and respectfully but very firmly, he lifted the girl's right hand to his chin. She had akeady stared at his fingers. Now she grabbed at his beard. Johnny's beard was no more than half an inch long but she pulled it. Hard. She called hi an excited, agitated voice to the bearded man whose leg was now in splints. Then she addressed Brett, pouring out a flood of unintelligible phrases. Halliday looked on with a cynical relief.

"She seems now," he observed, "to be neither notably ferocious nor remarkably afraid. I suspect that if you turn her loose she will probably signal for help. I only hope she'll explain that we aren't Thalassians and that we have five fingers and pullable beards! I'd never have guessed that the way to make friends with these people was shoot at an atom bomb and let my fingers be counted and my whiskers pulled!"

"Yes," said Johnny absorbedly. He loosened his grip on the girl's wrists. She looked at him with bright, still-surprised eyes. She looked pleased, too.

"Carstairs!" fumed Halliday. "See if you can ask her how the hell human beings got out here—were here when back home they were hunting mammoths—if she's human— talk to her and find out what we've got to know or go crazy! They can't come from Earth! Where did they come from?"

"I'm—getting ready to ask now," said Brett.

He fumbled in his pocket and found the locket he'd picked up on Firing Plaza One. He handed it to the girl. She exclaimed, and called something to the bearded man. He grunted, staring at the hands and beards of the members of the Expedition and plainly making painful but drastic readjustments of all his previous opinions. The girl looked back at Brett, expectant. He beamed suddenly. She smiled back.

He tapped himself on the chest.

"Brett," he said.

She cocked her head on one side, puzzled. Then she brightened. She tapped him on the chest.

"Br-r-rette!" she said happily.

Communication between theoretically intelligent beings of two different star systems had begun.