Science Fantasy

No. 43
VOLUME 15
2/-

Long Novelette
BEYOND THE SILVER SKY
Kenneth Bulmer

Short Stories
THE LAST WORLD OF MR. GODDARD
J. G. Ballard

EXPECTATION
Richard Graham

STARDUST
Alan Lindsey

Article
Studies in Science Fiction
8. JULES VERNE
Sam Moskowitz

A Nova Publication

BRIAN LEWIS

Did you miss any of these great SCIENCE FANTASY issues ?

Earth Is But A Star

John Brunner (No. 29)

Destiny Incorporated

John Kippax (No. 30)

200 Years To Christmas

J. T. McIntosh (No. 35)

Songs Of Distant Earth

Arthur C. Clarke (No. 35)

Echo In The Skull

John Brunner (No. 36)

Castle Of Vengeance

Kenneth Bulmer (No. 37)

The Sound Sweep

J. G. Ballard (No. 39)

The Ship From Home

J. T. McIntosh (No. 39)

All these and many other issues are still available at 2/- per copy (35 cents) post free

NOVA PUBLICATIONS LTD

Maclaren House, 131 Gt. Suffolk Street, London, S.E.1

Science Fantasy

Vol. 15 No. 43
1960

CONTENTS

Novelette

BEYOND THE SILVER SKY — Kenneth Bulmer — 2

Short Stories

STARDUST .... Alan Lindsey 63
THE LAST WORLD OF MR. GODDARD J. G. Ballard 67
EXPECTATIONS .... Richard Graham 96

Articles

STUDIES IN SCIENCE FICTION
8. Jules Verne .... Sam Moskowitz 83
THE FIRST DECADE .... Kenneth Johns 107

EDITOR : JOHN CARNELL
Cover by LEWIS from "Beyond The Silver Sky"

TWO SHILLINGS

Sole Distributors in Australia : Gordon & Gotch (Australia) Ltd.
In New Zealand : Messrs. P. B. Fisher, 564 Colombo Street, Christchurch, N.Z.
In North America : Gordon & Gotch (Canada) Ltd.

Published Bi-Monthly by
NOVA PUBLICATIONS LTD
MACLAREN HOUSE, 131 GREAT SUFFOLK STREET, LONDON, S.E.1
Telephone : HOP 5712

Great Britain and the Commonwealth, 6 issues 14/- post free
United States of America, 6 issues $2.50 post free

The entire contents of this magazine are Copyright 1960 by Nova Publications Ltd., and must not be reproduced or translated without the written consent of the publisher. All characters, names and incidents in the stories are entirely fictitious. No responsibility is accepted for material submitted for publication, and return postage must be enclosed.

Printed in England by Rugby Advertiser Ltd., Albert Street, Rugby 10/60

Few fantasy writers have done full justice to the ocean depths as a plot background —Arthur Clarke, Henry Kuttner and Frank Herbert being notable exceptions in the novel field. Kenneth Bulmer, who tackled this theme several years ago in a New Worlds *serial entitled* " *Green Destiny,*" *now presents just such another under-water fantasy, alien yet comprehensible to us earthbound mammals.*

BEYOND THE SILVER SKY

BY KENNETH BULMER

---

one

The wild lands had encroached perilously around the homestead in the ten seasons since he had gone away from Ochiltree. The nearness of the sky shocked him. He started the turboflier again from where he had paused along the ridge and dived towards the house in a sweeping curve that crossed matted beds of waving weeds and slides of glutinous mud where had been trim rows of tended bivalves the day he had waved goodbye.

His long hair swirled in the turbulence of his passage and the homecoming ache in him filled his throat with a poignant longing. No man with wisdom in his skull stayed away too long—too long ; the very syllables echoed the deflated depression that had sprung so disconsolately upon him. Everything changed, himself included, and before he could relax in the old familiar ways he would have to meet the family as a stranger.

Although the nearness of the sky depressed and alarmed him so that he fingered his trident in the fighting man's instinctive search for reassurance from his weapons, there was in him none of the rife and mind-destroying fear of superstition that riddled the outer keeps. There was even a strange joy to be taken from the colours and the iridescence bedappled about him.

A figure rose from the balcony as he approached and finned up towards him. So close to the shimmering sky her white clothing was tinted into a luminous blue. Her lithe rounded body cleft the aquasphere with impatient, joyous ease. Amazement took him.

" Miramee !"

She curved in towards him and caught the guard rail of the flier, clinging, gasping and laughing, holding her head high with her hair streaming in the wake.

" Miramee ! Little sister Miramee !"

She turned herself, eel-like, so that her laughing and excited face hovered inches from his own. Her eyes snatched vagrant gleams from the glistening sky.

" Little sister ! Why, you sere-skinned oldster, Keston !" They laughed, and the barrier of ten seasons collapsed like weeds before the slicing blade.

Looking at her as the flier sank towards the garage Keston saw the gaiety as a mask, a superficial excitement fleetingly generated because her big brother had returned home after so long. There was a shadow in her eyes and a pain in her face that might have set him wondering had he not been oppressively aware of the glittering sky, dancing so closely above their heads and reflecting menacing ripples from the house's concrete walls.

Dismounting from the turboflier he prudently left his weapons aboard, remembering Aunt Ranee.

Miramee saw the action and the smile left her face and she shook her head. " Aunt Ranee is dead. Over five seasons ago, big brother. We no longer have need to argue peace or war."

He shook his head in turn so that his long hair coiled and floated in the aquasphere. The sky was so close that his hair showed a streaked yellow. But he left the weapons there, all the same.

Miramee caught his hand. Laughing again, she kicked off, pulling him towards the vaulted doorway where the bronze

gates hung askew from hinges that had not been used for over a hundred seasons. He was not wearing his fins and so calmly allowed her to tow him along.

Inside the courtyard everything was the same, and yet disturbingly different. He pivoted, idly finning with his naked feet, looking as his eyes would and drinking in the old scene and the old memories.

" Come on !" Miramee was impatient. " Father knew you were coming—"

" He knows !"

" Of course. Since you have gone and the sky has crept closer we maintain a most efficient intelligence service. The Marshalls audioed that a turboflier—a fighting turboflier—had ghosted past their keep without stopping for the welcome that awaited within."

" I—I was thinking . . ." he said. And then : " I had no wish to argue with neighbours until I knew what was in the aquasphere."

She pouted her lips at him, wending down to enter the main doorway. " You were always the cautious one, Keston."

He smiled, a fleeting, grim smile compounded of memories that would bring no joy to many men's mothers.

" I have had to be cautious, little sister. And cunning. And, sometimes, ruthless. But I am alive."

She shivered. " Has it been so bad ?"

He rallied her, obscurely annoyed that his homecoming should be so coloured with echoes of decay and disaster.

" Away with you ! Where is father and mother ?"

On the instant he felt his heart leap. Aunt Ranee was . . . Perhaps, too . . . ?

Thankfully, Miramee pirouetted on one slender fin and pointed behind his back. A voice, a well-remembered, a well-loved voice, said : " So you have come back, Keston."

She was caught up in his arms, pressed close to his brown and sinewy chest, long before his eyes had time to tell his brain of the wrinkles on her face, of the tiredness in her eyes and the thin, listless droop of her figure.

" Mother mine," he said, after a long time. " Yes, I have come back." It would be best to deliver the wounding thrust quickly, so that there would be all the time at his disposal left for it to heal. " But not for long. There is a thing that I must do—"

"Don't say any more, Keston. Don't say anything. I know that men's lives are spent out in the deeps and that a woman must wait in the keep—and wait and wait." She put her arm around his waist and smiled up at him. Like Keston, she was not wearing fins, and he remembered the times he had been scolded for wandering about without strapping on his own.

"Now you can take me to your father—and kick straight with your feet and hold your head high so that your hair waves. Remember, you are a fighting man now—a fighting man . . ." Abruptly she turned her head down and Keston felt the spasmodic thrust of her chin against his chest.

Together, they flew through the doorway and so came into the great hall of Ochiltree.

It was as he remembered it. Smaller, perhaps ; but he had filled out in the turmoil of battle and bulked large. The groined roof was more thickly covered with growth, mute testimony to the creeping dissolution that choked this place and showed its strength in its power to undermine his mother's house-proud efficiency. The tattered banners still floated from their cross-trees, high against the walls. Each Ochiltree male placed his own banner there on the day he saw his twenty-first season. Keston's eyes swept instinctively to find his own. It was there. A flicker of reassurance warmed his heart.

"And do you gawp still, lost in self-love, lad ?" The great voice boomed at him, washing currents of sound in the vaulted hall. Despite his tally of kills, despite his scars and the searing memories of desperate encounters against overwhelming odds, despite his own esteem of himself that showed in dress and impeccable weapons, despite all the flummery that made of Keston a sudden and dangerous fighting man, despite all this, he started. He snapped his back straighter automatically as his father spoke.

Only then, when he was floating with evenly finning feet with the occasional unconscious gesture of one hand to bring himself balancing again, when he was once again in command of himself, did he raise his head and stare directly at the great chair of the Ochiltrees, where his father sat, waiting.

Knowing the slow sure fire of purpose in himself should have prepared him for the abnormal sameness in his father. Where all about him had changed—Miramee a grown woman, his mother ageing and worn down with care, his elder brother

Kaley so indifferent to his return as not to be present, the whole homestead, Ochiltree itself, decaying and wasting away —in all this change his father, Kevin Ochiltree, was as he remembered him, to the same clothes, the same lines in his stern and uncompromising face, the same jut of chin and twist of head that he saw in his own mirror.

" I was but remembering my youth, father."

" So you have returned. Well, the time is opportune."

Keston, obscurely and for no easily touchable reason, did not interrupt his father. He waited, patiently, until the big man sitting in the carven chair of solid stone with the pelts flung in careless profusion upon it had finished.

Then he said : " I cannot stay long. I came back to say goodbye."

His mother's hand was on his shoulder. Kevin Ochiltree glared at him, and Keston recognised and was torn by that glare. Here sat a man consumed with anger because he was growing old, with the sky pressing in on him nearer and nearer with each passing season, and when he turned for comfort and help from his sons, they—sons ? Kaley ?

Keston said : " Where is Kaley ?"

Miramee said impulsively : " Lissa is—"

His mother shushed her. " Kaley was married two seasons ago—Lissa, a girl from the Marshall keep. Kaley is with her now. Her time is due."

" And that is where you women belong," his father said in that chest-thrusting voice. " Keston and I have much to discuss."

" I think—" Keston paused. He had been about to say : ' I think not, father.' But he chopped it off. Not before the women.

When they were alone his father gestured imperiously.

" Sit down, lad."

Keston sat. On the footstool his father pushed out with one white leg. He repressed his involuntary shock at sight of that thin, gnarled and shrunken leg. His father's fins, resting on their hooks conveniently at his back, would swamp both feet with one fin. The crossed tridents on the wall at his father's back, the shark-skin shield, the ancient bronze sword and the modern, beryl-alloy blade, would all tax his father's strength merely to wield. No—his father remained true to Ochiltree

and in the general decay could not remain aloof and unchanged after all.

" You look well, son." There was a pause. Then : " Times are hard. You recall the Lawson homestead ? Harrap Lawson and his family ?" He shook his head. " They are living with us, temporarily. They have discreetly kept out of sight whilst you return home. They are here, and they are not the first."

Keston did not have to ask why the Lawson homestead was no longer tenable.

Or, rather, to be precise, of the two reasons why a keep or a homestead would be abandoned, the only one that fitted here was self-evident in that the Lawsons were still alive.

" How long ?" he asked.

Kevin Ochiltree moved one hand at random on the carven arm of the great chair.

" I am no scientist, like you, lad. I am a plain farmer, live-stock man." His mind caught the errant thought. " You saw the pens ?"

Keston nodded sombrely. " I did. Nearly empty. And the weeds and the mud. Ochiltree must be—" Again he paused ; it was delicate work telling your own father that the family home was on the starvation danger level.

Kevin Ochiltree closed his eyes wearily. " How long ? Marhall says three seasons at the minimum. Lawson, who saw the sky descend and engulf his home, says two. I do not know. All I know is that the sky is falling upon us, and that when Ochiltree is swallowed up, I shall not have the heart to leave. I shall sit here, with my fins and my weapons strapped to me, and wait for what may be, beyond the silver sky."

Softly, so that he barely stirred the aquasphere, Keston said : " And the Zammu ?"

Softly as he had spoken, the name rang in the great hall.

Kevin Ochiltree's granite face set hard, stubbornly, like a grouper refusing to emerge from a hole with the trident piercing his body. He bunched up, hard and uglily.

" As well talk to me about them as about the Hopeless Ones." His shrunken legs stirred so that the aquasphere eddied. " The Zammu have not been seen in this quadrant. I hear only second hand rumours of them. You have news ?"

" A little. They raid. They kill. They steal. That is common knowledge."

His father rolled a contemptuous eye upon him. " And you have been away ten seasons ! Studying, so you said, at the University. You have been a watchshark with the Emperor. The last audio told great stories of your prowess. And this is all you can tell your own father of the Zammu ?"

" All the details I could tell you resolve into this one thing. Man is everywhere drawing in, retreating in face of the descending sky, and the Zammu, who came out of that sky within the stored archival recordings' time span, the Zammu press us, harry us, kill and steal and soon there will be but one keep and one man and when the Zammu have made an end to him—"

" Man will never have an ending !"

Kevin Ochiltree's voice was harsh and resonant. A flicker of gold from the pets' cage showed where his favourite rainbow-fins swirled in unaccustomed alarm. Long weeds trailing from the groined vaulting undulated beckoningly.

" And when the sky meets the ground ?"

Keston had not meant to sound so fierce, so fatalistic, so crushed. His father sat back, scowling, rubbing one thin hand across his face. " When that day comes—"

" When it does," Keston said, amazed at this bludgeoning of his father, " you will long since have gone beyond the silver sky."

" Don't taunt me, boy. At least, we are Men still. At least, we have not fallen into the fatal flaw of the Hopeless Ones."

" The Zammu kill the Hopeless Ones, too, father."

" Good. They have ceased to be Men. The Zammu never were Men, though they ape our ways and our inventions and steal our secrets. Enough. I famish." He pressed the worn bell-push inset in the arm of the chair. " Let us eat."

" A noble thought, father. I, too, famish after my journey."

" Remiss of me, lad. Should have offered hospitality before. Let us have more light, so that I can see what University and the Emperor have done to my son !

Kevin Ochiltree had bellowed himself into a good humour ; Keston knew that a man's mind cannot face the final dissolution and so shies away and seeks outlets in exuberance. He rallied to his father's mood. The outer keeps were no place for a fine academic discussion on Man's destiny upon Earth.

two

The clustered light globes lit up among the festooned weeds of the ceiling. They shed their calm light outwards, bringing up colours, putting the natural red back in Keston's hair, throwing up the brilliance of jewel and precious metal in his father's cloak of ceremony.

" At least the lights are—" Keston said, and stopped.

His father brushed the implication aside. " Whilst the aquasphere contains sixteen hydrogen atoms to every eight of oxygen and our thermo-nuclear reactors operate, Keston, lad, then we have light and power. Ho, there ! Food !"

But it was not food that Miramee and his mother brought.

They finned in through the doorway leading from the upper bedchambers. Behind them followed Kaley. Keston finned upright to greet his brother as was seemly.

Kaley barely glanced at him. His dark, heavy face, so much like Keston's and yet as though retaining all the brute-force that in Keston had been refined into liquid energy, was sullen and indrawn. Now he said merely : " So you return to eat our food and then depart. Well, I—" And then he went on, Keston forgotten completely. He floated up and flew protectively over his mother and the bundle she carried.

Kevin Ochiltree's old face lit up. His hands began to tremble. He inched forward on the seat, rising slightly, finning futilely with withered legs.

" Let me see !" His great voice boomed. " Let me see my grandson !

Why, then, was Miramee hanging back ? Why was Kaley scowling so, fingering the sword at his belt ? Why was his mother sobbing so that her gown billowed about her ?

The monstrous suspicion blossomed like an anemone into certainty in Keston's appalled mind.

Old Kevin Ochiltree was hanging weakly over his seat, peering dodderingly down towards his grandson. Miramee put one slender hand on her mother's arm, and her mother gently, reluctantly, fearfully, withdrew the undulating shawl about the baby.

Keston rose and finned across, turned on his stomach and looked down.

The baby's pink and white face was screwed into a knot of digestion. The frayed mouth pouted, seeking, the cheeks

dimpled softly. The eyes of brilliant blue showed wide and unblinking, staring in wonder upon this strange and dramatic world.

And the hands.

Two tiny curled hands, like the most delicate of coral, weakly gripped and moved at the ends of rolled-fat chubby arms. Delicate, feathery hands. Hands with a tissue-thin membraneous web linking finger to finger and finger to thumb.

Kevin Ochiltree's cry was lost in the silence of the hall.

His shaking hands wrenched the shawl away, bared the infant's feet.

A thin, membraneous web, linking toe to toe . . .

" No !" Kevin Ochiltree choked. " My grandson—a Hopeless One ! No, it cannot be ! It cannot be !"

" But it is, father." Keston looked down without compassion on that chubby, baby face. " My nephew is a Hopeless One. He has webbed hands and feet. You know the Law . . ."

Kaley turned to face Keston.

" He is my son ! I know the law—and I know he is my son! Lissa went through hell back there—for this—and you quote the law at me !"

Quite unmoved, Keston said : " You know the law, Kaley." His hand groped along his side, sliding towards the familiar ridged grip of his sword. " Every Hopeless One must be killed, instantly, as soon after birth as possible. That is the Law. Our father is incapable of the deed. You, as the father should be spared the agony. I will steel myself to it—"

His hand, groping along the wide skin belt could not find his sword. Kaley, eyes wild, drew his own blade with a snicker that echoed eerily in this peaceful homestead hall.

" You shall not kill my child, Keston, for all the Laws in the Empire. Fin back, Keston ! You have no weapon—you left them aboard your flier. Fin back, I say—"

Keston retreated, the monstrous, blasphemous form of the Hopeless One there before him, destined to die at once. And he, weaponless, could do nothing. His brother would kill him.

He knew that, coldly and logically.

He turned on one naked foot, flailingly. In a long shallow dive he flew towards the door.

Behind him in the great hall of the Ochiltrees, he left consternation, heart-bursting grief, red logicless rage—and the blasphemous form of a web-footed Hopeless One.

For some reason, all the way back to his turboflier, Keston kept thinking of that day in primary school, when he'd been late because a mudslide had washed out the north field and his father had kept him back to help clear up. He could only have been six or seven seasons old, then.

The class had been droning some scrap of rote, a routine task. " After the worms the crustacea, then the invertebrates, then the fish, then the breathless ones, and after the breathless ones, Man . . ."

And into his young mind the chant had gone on : " And after the Man the Zammu . . ."

He'd said this, aloud, into the silence after the hush of children's voices.

The teacher—a dim and fading memory now—had rounded on him, stirring plastics from the desk. " After Man the Rat-people, the Hermaphrodilia, the octopoi, the whole great genus of the Corporate Entities, and *then* the Zammu. But, Keston Ochiltree, they are merely transients upon this globe. The rat people existed for a million seasons, and the octopoi for a hundred million. Where are they now ? Yet Man is still here, still lord and master of the aquasphere."

" And the Zammu are still here, after—"

" After a mere fifty thousand seasons."

He'd rebelled at being proved a shallow thinker. He'd talked back, been cheeky. He'd then received sharp corporal punishment.

It was at that moment that he'd decided that he was going to enter the Emperor's watchsharks.

Well, much good it had done him. To be caught without a weapon—he'd be the laughing stock of the regiment if they heard. The only reason the octopoi people had at last died out had been the simple one that Man was not caught without a weapon. The Zammu would go the same way—all intelligent life erupting freshly into the aquasphere was eventually conquered and banished by mankind. That was the indisputable lesson of all history and archaeology. The aquasphere was Man's.

Leaning into the flier to retrieve his weapons, Keston felt a mental ache at the counterpoint to that grandiose thought. The silver sky was descending. The aquasphere was shrinking. There was one answer to that problem, an answer that only fear-crazed men would seek, and yet he had volunteered to be

one of the band—and so had come here to Ochiltree to say goodbye before the great adventure. And he had come to find a new-born Hopeless One, one of those poor unfortunates who transgressed through no fault of their own the cardinal law.

Man is Man. Man must stay Man.

To keep the strain pure, no mutations could be allowed, even though common sense indicated that a man with webbed hands and feet would be more at home finning through the aquasphere But the law that had no recorded origin said no. Swim fins were so much a part of the dress of a man that natural finned feet would become a hindrance—it was all a mystery, shrouded in the distant and still undiscovered origins of mankind upon his world.

And still Keston had not buckled on his scabbard and drawn his blade, ready to return and slay the Hopeless One.

Kaley's son. His own nephew. He slid the sword up and down in the scabbard. Well, he'd seen the family again. He'd seen his mother and father and little Miramee—and Kaley. Why prolong the agony ? Why go back now, to face a fight with his brother and his murder and the slaying of the baby ? Why not let Kaley and the Ochiltrees work out their own salvation ?

Near above his head the sky winked and sparkled, sending scuttering radiance in ghostly splashes of ever-moving light across the ground. He slid the sword hard back into its scabbard.

So the law was the law and a hard task-master into the bargain. But of what real deep value the law, in these wild days when the sky remorselessly descended, soon to engulf the entire world and blot out forever all sentient life upon the planet ? Of what value then the slaying of a tiny helpless Hopeless One ? Of what value then in the final reckoning the adherence to the law and the murder of a tiny new-born baby—his own nephew ?

Trapped in a whirlpool of indecision, he mounted the turboflier and gentled the machine into the aquasphere, sent it spinning along towards Long Mile Reef. This was an infantile return to the days of his youth, and instinctive retraction of a matured personality confronted by problems hitherto outside its scope ; Long Mile Reef had been his hiding place and think-cache for as long as he could remember. Now, returning to it with his emotions torn and trampled by all that he had

experienced in the past moments, he could find little joy in the eagerly anticipated pilgrimage.

Everything was subtly altered by the awful nearness of the bedappled sky. Brain corals sprouted where before had been, to his uncertain memory, merely flat expanses of weed. But that, of course, could not be so. His memory was at fault. He was careful with the turboflier. He was still paying the instalments off, only about halfway through, and his pay as echelon-leader in the Emperor's watchsharks filled but meagerly the demands he made upon his purse. A repair bill from smashing clumsily into an outcrop of coral on top of the regular payments would see him finning moodily about barracks with empty purse instead of joying in his comrades' company in the taverns lining Global Way outside the palace.

The dim and looming blue shadow of Long Mile Reef had vanished. In its place lay a massive weed encrusted slope rising steeply to the sky. Again the sense of shock took him. Making all allowance for the difference in viewpoint from that of ten seasons ago he could yet still not fully grasp the scale of the catastrophe encompassing the world.

The sky pressed full on Long Mile Reef. Up there, where as a child he had perched in his own cave snugly buried in the depths of the aquasphere, washed now the dimpled silver coins of the sky. He shivered. Then, because he was an Ochiltree, and one of the Emperor's watchsharks, he lifted the turboflier and rose steeply, leaving a bubbling wake trailing beneath. Fronds trailed past. The colours brightened. Reflections glanced from the burnished handrail. His hair waving in the wake of his passage resumed its natural auburn tint. Resolved upon his purpose, he drove on upwards.

He could see for miles, it seemed. Down in the deeps, where even the best of the modern artificial lights could penetrate a mere matter of yards, man's eyesight could pick up objects far beyond mere normal light range. The chemicals in his eyes reacted now, filtering down, shuttering off the glare. He stared about, enchanted.

The first thing that struck him here, having driven through silent and deserted stretches, was the relative abundance of fish. Wild and untamed, they lurked in crevices, switched this way and that in thin shoals, their flanks catching the light and gleaming like a forest of blades. He wondered briefly what Kaley was doing, allowing all this potential stock to run wild. But one man could do only so much . . .

A hammerhead bumbled along, turning its clumsy cross-shaped head this way and that. For an instanst, as it passed, Keston saw the brand along its flank. The Running O. An Ochiltree mount, then. He was tempted to capture it and take it back ; but remembered that his problems would not be solved by the bringing in of one stray.

Amid a brightening light and shards of bubbles rising from some source below, he rose higher and higher towards the sky. He was perversely determined, having come this far, to reach his old cave. Already he felt sure that up the next weed-smoothed slope he would run across the little dell where the cave lay.

He had almost reached it, and already the choked exclamation of disappointment was rising in his throat, when the sky split asunder.

He knew at once what it was.

A wild and ferocious rim-runner would have reacted with split-second violence, seeing only another threat to his herds. His father, now, would have drawn his gun and blasted without another thought. That was the way the men of the outer keeps stayed alive and in business.

A scientist, a studious man from the University, would have paused and begun to take mental notes, watching in absorbed fascination a phenomenon which, to him, was as rare as it was common to a herdsman on the rim of the aquasphere.

Keston, born and bred a rim-runner, trained as a scientists' assistant and potential micro-palaentologist, and by choice and for a living a member of the Emperor's watchsharks, was torn between the two extremes.

His drawn gun in his hand, cocked and ready. Then he waited, coasting quietly along on the turboflier, watching the flitting shape of the breathless-winged-one as it chased fish. It was quite large, nearly as large as Keston himself. Its jaws—a beak, to give it its scientific name—were agape and collecting fish at a prodigious rate. Every now and then a webbed foot flicked down to turn the lithe body in a graceful curve. Strings of silvery bubbles followed its passage through the disturbed aquasphere.

These were wild fish, broken loose from the herds. Abruptly, Keston had no desire to kill the breathless-winged-one. Where it came from—ah, now ! That was the question.

He had spent night after night at University, arguing heatedly with his fellow-students. Some said this ; others that. Above the sky—what lay above the sky ?

The breathless-winged-one cavorted past, turning a beady eye upon him. Evidently it thought better of attacking the large and ponderous mass of turboflier and man, and, veering off, shot skywards again. In a shattering of splintering shards, it vanished through the sky. Coins danced up there, throwing light in radiant speckles across Keston's upturned face.

Those of his comrades who argued that the breathless-winged-ones were essentially the same as the great manta rays spoke arrant nonsense, according to others. Certainly, Keston could discern little similarity between the manta's ponderous wings and the incredibly fragile structures, covered with clinging spines, that had been dissected from slain specimens of the visitors from beyond the sky. He shook his head. The incident had settled something for him.

Without a backward glance, without a look either for the cave or for Ochiltree, he turned the turboflier and set it full throttle, back to the capital, back to the barracks of the Emperor's watchsharks.

three

Whether or not he believed the story about the first compressed-gas guns had never bothered Keston ; it was a good tall story. It went that men in those distant days used to fabricate a metal tube with a piston equipped with a spring-loaded catch. They loaded the tube, sealed at one end, with gas produced with much laborious care from blended chemicals and lowered it at the end of a cable into the great deeps. Mounting pressure steadily forced the piston up the cylinder, compressing the gas, until the spring-loaded catch clicked shut, bottling up the gas imprisoned within. All that was then necessary was the drawing up of the cylinder.

Now, of course, a good few million seasons or so later, men merely used their nuclear power sources to produce gas at pressures inconceivable to those early men. And yet, his own researches as a student working with Professor Lansing had taught him that men had existed on Earth for millions of seasons before that. The more you delved into the past the

longer the perspectives of time opened up, reeling in a mind-intoxicating vista of forgotten epochs.

Empires had risen and fallen, Republics had waxed and waned. And still men had gone steadily on, cultivating their farms, building their cities, as each upheaval subsided sending out fresh waves of exploring ships to open up lands that had only yesterday teemed with the activity of their ancestors.

Old Professor Lansing, long hair bleached under the artificial lighting, had roundly castigated Keston the day he had told the old man that he was leaving University and entering the watchsharks.

" Those butchering maniacs !" Lansing had exclaimed, peering up with eyes more used to the delicate world in a microscope. " Well, young Keston, if you must. But think of what you are giving up ! You have a great future. Micro-palaentology and archaeology are in their infancy. We have great work to do, great work—"

" Perhaps, when I have served my hitch, Professor . . ."

" Well, go then, go. Rattle your sword. Use the Light-given power of science to fire off guns instead of seeking to unearth more knowledge of this globe we live on. This world is all there is to us. It is all we have—"

" And it is shrinking."

" Yes. Well, one day, one day . . ."

And so that day had dawned. Just like any other day. He'd risen on the watch-alarm, dressed, donning his uniform with skilled and obedient hands, buckled on his weapons and reported at the guardroom. Echelon-leader Faro was there.

" Keston, old son. You're in for it. Report to no less a person than Guard Commander Nardun himself, in person." Faro had laughed, his teeth blue and gleaming in the dawn-light. " I'm taking over your duty here. And may the Great Light have mercy on your soul !"

Guard Commander Nardun, middle-aged, burly, tough as the sharkskin shield hanging on the wall at his back, was curt.

" You are asked to volunteer for an expedition. Professor Lansing specifically requested you. Why, I cannot imagine."

" Yes, sir."

" I cannot tell you what it is. Just report to him. And if you let the watchsharks down, I'll feed you to the stonefish pen myself. Hear ?"

" I hear, Guard Commander."

" Fin, then !"

Keston had finned.

And that had brought him here, fleeing from a decision he could not summon the courage to take, fleeing from his family after unsatisfactory goodbyes, fleeing from his own mother and father and brother and sister and the awful menace that descending upon them more narrowly season after season could have but one end and one finale.

He sent the turboflier skimming over the ground, hurdling dangerously upflung rock formations, skirting the flanks of knolls, riding across crags that leered with sharp-fanged edges. The further he went with the dim and ghostly outlines of massive cliffs rising and falling across his horizon the deeper he penetrated into the aquasphere. The dimpled sky receded, fading, shading from blue into green and the deep darkness opened out beneath him into which he could plunge bodily and feel at home. Damage to the flier suddenly seemed of small consequence beside the inscrutable menace of that silver sky.

Only once, as a headstrong and wilful child, had he ever dared thrust his head through.

Nightmares had plagued him for days afterwards. The memory of heat, of scorching barrenness, of a condition that he had no words to describe, even now could bring him up in his hammock, shaking and shuddering. His eyes had felt as though struck by a sword dipped in nuclear acids. The bludgeoning impact of that experience had never left him—and yet, standing in the familiar vaulted rooms at University, idly finning with curved hands, seeing Professor Lansing smiling at him and proposing his fantastic expedition, Keston had said yes without hesitation.

Thinking of Ochiltree, of his family, of his new little nephew who was a Hopeless One, and of the crushing might of that descending sky, he felt a negative reassurance, as though he would be leaving nothing good, and nothing worse could befall him.

All across Nablus, the capital city of the Empire of Goldenzee, the coloured watch fires flared. From tower to spire, cascading down arched and turretted wall, shooting unexpectedly from recessed embankment, shedding a refulgence over the crowds finning in the streets and rising and falling from doorwindows set at all levels, the nuclear flames poured forth

their radiance. Nablus was a wondercity of light and colour, sparkling in the crystal aquasphere like some fabulous gem of mysterious antiquity.

To Keston, nursing his turboflier with curses and impatient fingers, the city boiled with life and colour and movement. The weed-cluster that had been gulped by his motor and entangled in the turbo-fan had been partially cleared in a rushed emergency repair in the current shelter of a coral outcrop, dead these millions of seasons. Some weed had resisted his poking instruments, so that he had had to creep back along Global Way, heading for the palace and the barracks like some fish poacher on an outer homestead.

At last the very frenzy of the movement all about, with fighting turbofliers scudding, crammed with armed men, the absence of women in their brightly coloured trailing garments, the smooth effortless sweep of a squadron of shark-mounted cavalry and the current-creating passage of batteries of heavy artillery, drawn by harnessed and electrically controlled sharks, all this at last aroused in him an awareness that all was not as well with Nablus as when he had left.

Were all returns then to be dogged by the brooding menace of imminent disaster ?

A passing militiaman, swinging from his sword-fish mount, seeing his uniform gave him a wave of his arm. His hair swirled wildly. " We need every Man, watchshark ! We'll give them bloody bellies !"

Keston began to understand then.

And to Nablus ! To the sprawling, many-levelled, mighty Nablus, capital of the whole Empire of Goldenzee, even here, the Zammu had no fear of penetrating.

A shiver touched his spine and he urged the limping turboflier on with an impatient hand on the throttle. He was feeling the pulse of the city now, the breathing surge of the ten million inhabitants all about him. This was life as he had come to understand it, a life so far removed from all that he had known at Ochiltree that his father would have been here as a little child.

And that thought brought up an unpleasant memory, so that he was scowling under his mop of waving hair as he reported in to the barrack guardroom.

As luck had it Echelon-leader Faro was on duty. His young, reckless face, already deeply scarred by a sword-fish snout, lit up at sight of Keston.

" Keston, my wandering pilot fish ! Back so soon—bah, you always had a nose for trouble. No sooner do the Zammu threaten attack than you are here, arising in our midst—" He peered more closely at Keston. " And why the ferocious scowl, lad ?"

" I had no idea the Zammu were attacking, or even that they would ever dare—"

" I agree." Faro rattled on in his feckless way. " That they dream to attack Nablus, sacred city of Goldenzee ! They will be destroyed this time, every last belly of them."

" Maybe." Keston was not thinking as he spoke.

Faro finned up, swirling his flippers before Keston's nose. " You dare to say that ? You doubt—"

" No, no, Faro, not that." Keston was tired, irritable, anxious, if there was to be a fight, to get it started right away. " No, lad, you mistake me. I merely mean that I may not be on hand when the belly massacre begins."

" Ah !" Faro said, wisely. " Professor Lansing."

" Yes. And now, if you'll just do your duty and sign me in instead of flippering about like a sardine, I'll go to my quarters and change into fighting gear."

" Right. And when you have done that, report to Guard Commander Nardun. And, my lad, fin !"

Had Keston been other than he was he might have considered speaking to Nardun, of unburdening the load oppressing his spirit, and of seeking help and advice. He knew that he had broken the strict letter of the law. At the time he had justified that. Justification had been easy with the silver-dappled sky pressing in on Long Mile Reef, overwhelming his own private cave. The breathless-winged-one, spearing in from some remote and unthinkably mysterious region—region ? was there then a *place* beyond the silver sky ?—had given added impetus to his feelings that a mere tiny Hopeless One could have no further significance in the scheme of things.

But now he was back in Nablus, back in the hub of the Empire with the bustle and throb of a great metropolis all about him, and he was thinking once more as a civilised man.

Yet, to speak to Guard Commander Nardun would be useless. The advice Keston would receive would be simple ; Nardun might even consider it necessary to have him arrested and charged. His own shifting sense of proportion, of what was right and what was wrong, must go down in face of that possibility, no matter how he sought to excuse it. When the

Zammu were attacking Nablus, when there was the silver descending sky to consider, why, then, the place for Keston was in the fighting ranks, not mouldering in some slime and weed-infested dungeon.

So, that meant he had to live with his conscience.

One way of doing that was to throw himself into his work here, adhere with the blind devotion of a sharksman to his duty and shut out from his foolishly questing mind any other unwelcome intrusive thoughts. And at this very moment Guard Commander Nardun would have been alerted by echelon leader Faro's audio call from the guardroom. Probably Nardun was even now calling back, demanding of Faro why young Keston hadn't reported in yet, his dominating, domineering face staring out of the audio-visual screen set in the angle of the guardroom roof, hectoring Faro, giving him hell.

Keston finned rapidly to his room, leaving the damaged turboflier temporarily by the guardroom gate. He could pick it up later. His own room, bare, austere, sleeping hammock the main feature, seemed suddenly to welcome him with an anthropomorphic pleasure. He flung the uniform cabinet doors open and selected his second best uniform. He was wearing his fourth best, his best was still strapped with his baggage aboard the turboflier. The third—hah ! That was being repaired from the wreck ensuing from an enjoyable tavern brawl with the atomic artillery boys down along Global Way.

His fingers were sure and steady as he strapped on the wide skin belt, adjusted the shoulder harness and the rank badges which, in covering his operculum over his gill slits also performed the necessary function of modesty. A girl might show anything—within reason—but to no man save her husband would she reveal her operculum. Most women, Keston heard, fiercely resisted showing their naked gill slits even to a husband of many seasons familiarity. This was just another of those unspoken-of mysteries stretching back into the womb of time.

A man breathed in through his mouth, the ambient fluid entered his lungs where oxygen was extracted and was then, recharged with carbon dioxide, passed out again to be ejected through the gill slits which also, in their fashion, carried on a minor oxygen-carbon dioxide exchange. This was a mere physiological function. But many a man had been stabbed to death for merely raising a girl's cloak over her operculum.

Oh, well, all this merely brought back bad memories of that other mystery-shrouded law that he had flouted, and drastically slowed up his time to Guard Commander Nardun, which was, all things considered, an extremely bad thing.

He drew up the three-cornered skin loincloth, working his thighs into a comfortable position, and strapped the wide belt across, over the suspension belt beneath. Then his sword. After Kaley, never, never would he leave his weapons again . . .

Even though the sword was of use only against close-action fish, it was of some sacred significance and had before this save his life. That time when the cudas had snapped his trident and his gas gun had been expended . . .

It was all very well for the atomic artillery boys to laugh at a sharksman's sword ; *they* weren't up at the sharp end where out of the blue veil sudden peril could strike quicker than an atomic shell could be thought of, let alone loaded and fired. Which reminded him of his third best uniform, and so, back again to Nardun. He blew into the aquasphere, chuckling. Already, back in the bustle of the big city, with walls and lights and traffic all about, with the threat of danger and perilous adventure beckoning, he was finding his good humour.

He slid on his most flexible fins and sped off to Nardun.

Guard Commander Nardun kept him waiting. Calling back to Faro indeed ! How come echelon leader Keston thought himself such a big fish that the guard commander would worry his head over him ? It was a suitably chastened Keston who reported into the big room with the desks and wall charts and the aquasphere globes lining the ranked shelves. Each globe contained a sample of the liquid from all known areas of the world that had been reached and surveyed by explorers from the Empire of Goldenzee. There were a great many ; their colours, salinity, plankton content and all other pertinent data neatly recorded below them on beryl plates.

" Ah, echelon leader Keston ! Come in, come in."

Keston entered and allowed himself to float down to the indicated bench. He waited.

" I am pleased that you cut your furlough short, Keston. I assume it was not because you heard that the Zammu were attacking Nablus itself ; but I am not going to enquire into your reasons. Suffice it that you are here."

" Yes, sir."

" Good. You know the position. The sky can no longer be considered stable and we must plan therefore on a basis of a series of continuous attacks upon the Empire." The shadow of pain crossed Nardun's granite face. " That those attacks should begin in full strength upon Nablus itself is bad fortune; I see it in no other light."

" No, sir."

" Where the Zammu came from we do not yet know. They have plagued us for fifty thousand seasons, on and off. We thought, once, back in the Republic of the Three Fins that we could bargain with them, come to an agreement. But much has happened since then—time has passed—the world has changed and there is a shrinking aquasphere to be shared between two intelligent races and far too many other animals."

" Man has always won before, sir—"

" And he will again—against the Zammu."

There was no need to elaborate that thought. But even though the world might be dying, man would still go on fighting for his share of its goodness, right up till the last day when the aquasphere finally vanished and the sky touched the ground and that blinding light and heat that scorching *otherness* that Keston so vividly remembered consumed them all.

" Now then, Keston. I know you are not just a plain fighting man. I know of your scientific work before you joined the Emperor's watchsharks—by the way, you might be interested to hear of Professor Dinar's latest work. He has developed a system of mirrors which is extensible and which he hopes to extend through the sky to observe what might lie beyond—if anything does," he added, with a shiver.

" I am interested, sir. This is wonderful ! Although, I have heard the theory that a mixture of gases lies beyond the sky, although what they might be and their extent is so far beyond knowledge."

" A theory, surely ? Well, then, my time is limited. I know of your journey with Professor Lansing, of course. However, in this moment of dire peril to your city and Empire, I feel that you may wish to join the ranks of your comrades fighting shoulder to—oh, hell, Keston, you know what I mean. I can offer you a squadron, you know." The last was said indifferently, as though Nardun wished it to be made clear that he was not offering this promotion in the way of a bribe.

" A squadron !" Keston's pulses quickened. After all, he was a sharksman, promotion in his corps was the road of his career. And, to lead a squadron, to feel the undulating forms

of a hundred tiger sharks at his back, each with its two riders clinging to their harness, guns and weapons ready, the gay banners flying—it was a heady picture. He'd have his own trumpeter, too.

It was what he had signed up for, what he had planned that day back in primary school.

" May I have time to think, sir ? I feel I could handle a squadron ; but . . ."

" Still a scientist at heart, eh, Keston ? Well, go see Professor Lansing. But I will add that the regiment can do with you. We are going to be desperately short of trained men."

" Yes. I know, sir. But . . ."

The screen set above the wide desk lit up as the audios pinged in. " A call for you, sir, from General Zwohl. Urgent."

" Put the General on please. You will excuse me, Keston ?"

Keston saluted and retired. As he finned through the door he glanced back, past his billowing regimental cape. General Zwohl was on the screen, thick-lipped, scowling, impatient. " We must put a screen across the bad lands to the north, Nardun. I'm sending two squadrons of your sharksmen and a detachment of artillery and what turbofliers I can scrape together. The damned Zammu are everywhere . . ."

And then Keston was in the corridor, under the calm lights, just hearing the tail end of General Zwohl's complaint.

". . . in the ancient days they would have sent a fleet of battleships with atomic cannon to blast these damned Zammu. As it is we must make shift with shark-mounted cavalry and pop-guns . . ."

Yes, that was it, Keston's thoughts rode the idea sombrely. The whole world ran in cycles, up and down. And the Empire of Goldenzee was on the trough, laboriously climbing the incline. A couple of thousand seasons ago, and there would have been no pop-guns, even, only bronze swords and bone cross bows against the impervious Zammu. But—a few hundred seasons in the future, and perhaps once again mighty fleets of manned battleships would roam the aquasphere, clearing the world of the Zammu, sweetening it and making it clean for the children of those who fought so desperately today.

Few hundred seasons in the future ? By then, perhaps, the sky would have engulfed all of the ground and with it all of mankind.

four

He flippered casually out into the courtyard and rose until he was level with the topmost tower. He could look about him now with the hyper-sensitive sight possessed by all men. In him the lassitude of his thoughts made any energetic movement, and decision, eminently postponable. He would fin idly over to see Professor Lansing. That squadron beckoned like the juicy meat in a lobster claw. The impending tragedy for all of mankind was inextricably bound up with his own fate, and yet that race-doom far overshadowed his own puny problems. Why worry, when whatever you did posterity just would not exist either to acclaim or condemn ?

Much as he might be aware of mankind's gift for overcoming problems as so clearly shown through all the past ages, he yet felt as one with those who would retire from the cuda-race and drift gently in a roseate cloud of their own imaginings. Once, long ago in the golden age of the Commonwealth of the Five Oceans—no one knew now what the word ocean meant—they had found their idealistic mode of living unable to cope with their discovery and abandoned use of nuclear power. They had smashed up their world in the titanic blasts of hydrogen bombs. When was that, now ?—a hundred—no, more like five hundred thousand seasons ago and yet, here was mankind still, and again facing a definite threat that would end him forever.

Because this time, there would be no welcoming world awaiting the creeping emergence of mankind again from his caves and hovels huddled against the coral reefs.

Movement far below attracted his attention and he let his gaze wander idly down the many levels. Far down there a marching column was finning steadily out and away, gradually inclining upwards, heading out and into the great deeps. He could make out the sleek forms of swordfish with their harnessed riders, the many flittering figures of infantry, finning in an eight deep phalanx, their thirty-foot tridents forming a bristling hedge of beryl fangs. Poor devils ! Cannon fodder at best—no, rather, at worst. At best the beryllium wall against which the maddened onslaughts of the Zammu would break in a red tide of confusion and bloodied bellies.

And—he'd heard through the coral-line that the infantry phalanxes were being equipped with plastic shields, tougher

and more manoeuvrable than the old sharkskin targes which hung at every old man's back.

Turning away, he looked across the steepling spires and towers of golden Nablus, and wondered if all this colour and life and gaiety would end with the marching fins of lines of fighting men and the thin dolorous howling of husbandless wives and fatherless children. That had happened so often before, back through the fleeting mists of time, odd corners only of which were raised by the painstaking toil of men like Professor Lansing. Reluctantly, he left his eyrie and finned slowly down towards the University.

The age-old stones again extended a welcome to him as his room in the barracks had done ; but this time the greeting was warmer, more profound, more personal. Here, he felt with a sudden wave of understanding, lay his true vocation in life.

Surely, he had thought as a young man eagerly supping from the overflowing cup of wisdom held out to him by the willing hands and brains of the University, surely a man can be more than just one simple thing in this life? Surely, he had thought, a man might be a student, seeking to learn all he could of the wisdom of men and to grasp what might be of an understanding albeit dim and fragmentary of the wonder that was human life, and yet, at the same time, be in the fullest sense a sharksman ready and able to fight for his empire and his race against the darkness that threatened ?

So he had thought ; and the dream had grown dim and tarnished during long hours of piquets and guards and spasmodic fierce forays against the raiders from out of the deeps. He had grown calloused, a fighting man, living in his war harness, his sword hilt growing into a permanent part of his body like the weapon set in the jaw of a swordfish. And then had come the summons from Professor Lansing to accompany him on the strangest expedition ever known in the history of mankind. And he had jumped at it, despite his primeval fears and childish experience. He had leaped at the chance.

And now, and now the Zammu were attacking and his duty called him to stand by the side of his comrades when they met the oncoming shock of the alien wedge. Alien. Well, what was alien, if not a man or being who was not born within sight and sound of your own nuclear reactor ?

Flying down towards the University and hovering for a reflective moment above those time-hallowed walls, he allowed his mind to roam back upon the men he had killed. Men who were aliens because they hailed from a different quadrant of the habitable aquasphere. Men, yet enemies because they did not own allegiance to the Empire of Goldenzee. Now they were all men together, facing the truly alien threat of the Zammu.

And yet, the Zammu had been spawned on this globe, born like men under the same silver dappled sky.

Truly, all of life was a puzzle. And perhaps one of the greatest, yet the smallest seeming of all, was the problem of the Hopeless Ones ; men who yet were not Men. Like his little nephew, born with a mebraneous web linking his fingers and toes, a true adaption to life in the aquasphere. Yet an adaption that was not wanted, was abhorred, was condemned and was therefore cut out from mankind's heredity with the swift and impersonal precision of the surgeon's scalpel.

With these vague and grandiose thoughts thronging his mind he finned into central corridor, heading for Professor Lansing's extensive laboratories, and came face to face with Soyle.

The lecturer backed up momentarily, and then as he recognised the uniformed sharksman before him, his coarse face creased into a mocking smile.

" Assistant Keston ! Or should that be sharksman Keston ? Or what ? Hey, Keston, or what ?"

Keston was completely taken aback. Certainly, he remembered lecturer Soyle as a loud-mouth, a cuda-eyed vicious wart. Now the man was garbed fashionably and rufflingly in over-smart militiaman's uniform, the rank patches over his operculum denoting the rank of echelon leader. He fingered his sword which was ostentatious and over-elaborate, the hilt a congested mass of precious stones.

" Hullo, Soyle. I'm in a hurry. Let me by, please."

" In a hurry. Yes, that sums it up, Keston. In a hurry to get away from the fighting now that it has come. You were fresh enough to join the watchsharks when it was all a case of ruffling it down Global Way—but now that there is business to hand, you slither off like an eel to join Lansing's fantastic circus—"

" Out of my way, Wart."

Soyle's sword flashed once as he drew it, twice as he lunged.

Keston was not taken by surprise ; he was not a sharksman who was still alive after season's of battle and sudden death to

be taken by surprise by a jumped-up militiaman. His own plain hilt snugged sweetly into his palm. The first wild thrust was parried with a screech of blades. Then his point was inches from Soyle's throat and his left hand was bending the other's right hand backwards.

Soyle shrilled in pain as his hand bent against the bones.

The sword dropped. It stirred silt as it struck the floor. Keston drew his left hand back and struck, edge on, across Soyle s cheek. The red stained up like a chameleon-fish. Then he let the man drop, kicked him aside, and finned up and over the sprawled figure.

He didn't even bother to look back. Soyle had been wearing no gun ; if he had Keston would probably have killed him, then and there, in the sacred precincts of the University.

Red confusion and shame hammered in Keston's over-strained brain. Soyle—that wart Soyle, accusing him of cowardice because he was contemplating joining Lansing's expedition. Didn't the fool comprehend the dangers involved? Or was he merely jealous that he had not been invited. Lansing was a wise old turtle. He'd known that a ready sword and a crack shot would be needed ; not some half-cocked amateur militiaman too ready with his mouth and too slow with his blade.

There was no valid reason why a braggart's maggot-mind should upset him or make him ashamed ; but to Keston there had been too much of his own smothered feelings in what Soyle had said for his comfort. If he went with Lansing on this madcap scheme that when it had been broached had seemed of such high scientific purpose, why, then, he would be running away from the battle and the noise and tumult of the conflict. Keston had run away, quite recently. He had run out on a decision that he could not make. And in that flight he had left behind a Hopeless One to live and blaspheme the law, and he had left behind the shreds of his own self-respect.

So it was that he finned harshly through Lansing's open door, filled with ugly self-doubt and a smouldering desire to hurt someone—preferably himself—and the cold decision lying like a lump in his stomach to spurn the professor's offer and to rejoin his comrades and march against the Zammu.

Courtesy halted the thronging, angry thoughts in Keston's mind when he saw that Professor Dinar was with Professor Lansing. The two elderly men were so much alike they made

a fit subject for a funny cartoon that might be published in one of Nablus' many comic plastic news sheets. Keston halted by the door, finning gently, politely taking care not to disturb the aquasphere and inconvenience the two scientists. Without embarrassment he listened to their conversation.

". . . even if it should turn out to be a mixture of gases, as now seems relatively certain, the problems are still of the order with which we are familiar in laboratory work."

" My dear Lansing, I agree absolutely. The pressures and temperatures with which we juggle, the incredible advances, incredible even to a physics man like myself, of the past few seasons, lead me irresistibly to the conclusion that no matter what we may find will be overcome and all problems solved." Dinar paused and delicately inhaled from his cut-glass perfume dispenser, a luxury that Keston could not afford and so rationalised into a vice. " I am reminded of the work of Doctor Somes some fifteen seasons ago. Nothing much came of it in the final fin—I believe he was chopped by the Zammu on a fresh scientific expedition beyond the safe areas."

" That is so," Lansing nodded. " I know the work to which you refer. He found caverns within certain mountain ranges where the sky unaccountably and arbitrarily appeared where no one expected it."

" Yes. The darkness was absolute and artificial lighting had to be used continuously. But his report, which did not receive a wide circulation, stressed the theory that above the sky lay an almost impossibly thin mixture of gases. When we liberate gases from the aquasphere with great heat, we cannot always trace their final conclusion . . ."

Lansing laughed. " You will bring up the hoary old one, my dear Dinar. ' What is in a bubble and where did it come from and where does it go ?' "

Both men chuckled. That problem had been a conundrum for many generations of men. Keston listened avidly. This talk was of the sort that he sorely missed in the machine-like barrack rooms of the watchsharks. He remained silent.

Despite his caution, the languid currents reached the two scientists and they turned, smiles lighting up their faces.

" My dear Keston—" Lansing finned forward, hand outstretched. Keston grasped it, warming to the affection in the old man's glance and clasp.

" Professor Dinar, may I present to you Assistant Keston, a most able young man who chooses to waste his talents—as you may observe from the barbaric uniform he wears."

Dinar laughed, and shook hands. " It seems to me that many of us will be donning uniform and reverting to barbarism if the Zammu do not allow us to live in peace. Were I a younger man . . . Well, my fighting days are done."

Lansing cocked his wise old head. " If you are serious in your quest, my dear Dinar, that remark may strike you as exceedingly funny in a season's time."

" Oh ?"

Lansing brushed that aside. " What happens, Keston, when a pressure valve jams on a flier motor, and she descends to great depths ?"

Keston grimaced. " Implosion."

" Precisely. Now we are designing a turboflier that may have to operate in conditions entirely the reverse from those extant in the normal world. A hundred seasons or so ago to mention anything as existing beyond the silver sky would have brought frowns and immediate incarceration in a lunatic asylum. A hundred seasons before that, and before you'd framed your remark, you would have received eight inches of sword in your abdomen for blasphemy. The Great Light, it was said, would not be mocked."

" But we live in a more materialistic age now. Science is pushing back the frontiers of the known all the time . . ."

" True. We now no longer credit the Great Light with a supernatural origin. We still render obedience to our childhood teaching ; religion must form part of any thinking man's mental makeup. But, I venture to suggest, no one has ever dared to ask what exactly—*in material terms*—the Great Light is."

Keston felt hot and cold. Childhood memories of teaching at his mother's gently waving fins seized him with the vertigo of past time. Sacrilege, blasphemy—well, what right had he, a man who allowed a Hopeless One to go on living, to cavil at a little more blasphemy ?

" Go on, Professor," he said quietly.

" You were invited to join my expedition for the obvious reason that you had worked with me. We both know what we seek. At least, I trust that you do ?"

Keston nodded. Whilst what he sought was not crystal clear to him he had enough of an idea not to need to contradict Lansing.

" Well, then, imagine that you are in the ring, facing a sword fish, armed with the standard sword. Who will win ?"

Keston laughed. " A man will win, every time."

" Again, true. But, suppose it were I, or Professor Dinar, in the ring with our swords, facing the swordfish. Who, then, do you suppose, might win ?"

" Well—" Keston hesitated.

Dinar said heavily : " The fish would win."

" Yes," Lansing said. " Because we are not trained fighting men. Keston here is. That is the other reason why you have been invited. Not because you are a fighting man, but because you have been trained in aptitudes that we may need. It is easier to train a scientist, when caught young, to be a fighting man, especially when as a youth he was a rim-runner, than it is to try to knock scientific ways of thought into the thick cranium of a fighter."

" So that's why you made no real effort to prevent me joining the sharksmen !"

Lansing chuckled, and patted Keston on the shoulder.

" This trip has been planned for a long time. I have picked my men and women well."

" And I ?" asked Dinar, eagerly.

" There is room. The dangers are great. There is a most strong possibility that we will not return."

" I'll go and pack right away."

" Wait, wait !" Lansing laughed. " Tell young Keston here of your latest experiments."

"You mean in the extensible optical system?" asked Keston.

" My ! my !" Dinar marvelled. " You keep up to date, young man."

" He fins sharply," said Lansing, with a sly smile.

" Well, the results are what matter. I managed to get the apparatus through the sky and looked." Dinar's manner changed. Like so many other scientists who discover earth-shaking truths in holes and corners, working like guppies in the obscurity of great buildings, he was profoundly moved by the importance of his own work, a little scared, and deeply humble in gratitude for his own part in the work.

" I chose night. All I saw was an apparently limitless area of fire fish, thousands upon thousands of them, in every direction. They did not move. They just swam there, motionless, glittering, cold and seemingly infinitely remote and yet strangely, close at hand. The scale had no meaning."

" And during the day ?"

" One assistant was temporarily blinded by the Great Light. We did not dare resume our experiments for some time. Then, I risked it. We had not so far been blasted for blasphemy. '

" And ?"

" I find it hard to describe. The optical system allowed only a hundred eighty degree traverse, up and down and around. Directly ahead lay mountains, as you might see any time in the aquasphere rising from the floor. The visibility was incredible. I had the impression that everything was very bright and very tiny. Just a limitless space, the mountains rising in the distance, and—"

" Well, go on, Dinar !" exploded Lansing.

" Above me, finning like mantas, were creatures. I took them to be the breathless-ones—breathless-winged-ones, for like mantas their wings were extended and beating."

" So that there *is* a place above the sky !" exclaimed Keston.

" And our problem," added Lansing, soberly, " is to know how to reach it."

So that was that.

Keston was now committed to the expedition.

He felt elated, sloughed of the worries that had plagued him. One fighting man more or less would make no difference to the Zammu. Whilst his comrades fought to the bitter end, he would be away, *somewhere*, out there beyond the silver sky.

five

On the day that he was to see for the first time the gas ship and to make the acquaintance of the vehicle in which he was to spend possibly the rest of his life, his own regiment, the Emperor's watchsharks, moved out to the front. He went to see them off. Out of an ashamed decency, he discarded his bright uniform and donned simple civilian clothing, blending with the cheering multitudes as they finned excitedly along the various levels, watching the fighting men marching out.

Emotions tore at Keston ; but he was able to see quite clearly where his destiny lay. In that long array of undulating

tigersharks, each with its two-man load strapped into their harness, their gas guns sheathed, their swords scabbarded and their tridents all aslant at the regulation fifty degrees slope, with the banners heading up each squadron the regulation number of shark-lengths in rear of the squadron leader and his trumpeter with the great conch shell curving up over his shoulder, streamlined into the current, among all that colourful, glittering and heart-catching panopy, one man more or less made no difference. He watched them go, hearing the shrill lilt of the trumpets, seeing the current-fluttered banners, critically observing their alignment and bearing and through it all wishing desperately that he could rush out from the onlookers, break ranks and fall in to march as a simple sharksman strapped to the coarse banded flank of a tiger.

He turned away, flippering awkwardly, colliding with the stone supports to balconies and archways. Then he shook himself roughly. By the Great Light ! What was he, anyway, a miserable little tiddler, squirming on the end of barbed emotions, or a mature man, a scientist before he was a sharksman ? He finned strongly, sure now of his fate in life.

Bolstering his new found resolution, he did not visit the taverns along Global Way as he had planned, to recapture something of the golden past. Instead, he flew straight back to University and to the new laboratories where the gas ship had been building for the past six seasons.

Professor Lansing met him, finning awkwardly with his arms full of plastic sheets. Keston relieved him of the load.

" Ah, Keston, my lad. All gone ?"

" Yes, professor. They're gone. And now—?"

" Dinar is almost incoherent with impatience. I left him at the valves. These plastics—I must have them with me, many of my calculations demand re-working. After all, we are the first men in the history of the world to build, man and fly a gas ship."

" Has she flown then ?"

" Hum—no. But she will, lad, she will."

" I am familiar with the theory by now," Keston said, falling in beside Lansing, " but just how you have applied it exercises my imagination."

Lansing laughed. " Here are the valves. This is the day. All you have to do to satisfy your imaginative conjectures is to

allow me to open the sonic lock, usher Professor Dinar and yourself through, switch on the lights—and . . ."

For a space thereafter both Dinar and Keston remained silent.

Surely, he had been familiar with the theory. A descent from the upper levels into the great deeps demanded the greatest care over valves and pressures, the skeleton ships used allowing free access to all enclosed parts by the surrounding, crushing aquasphere ; yes, he understood that all right. Conversely, although the concept was harder to grasp, a reduction of the pressure of the aquasphere demanded either a skeleton frame to allow for compensation, or a very strong container to withstand the explosive, instead of implosive, force. Keston had seen snared fish from the deeps, expanded and bloated and had no wish to share that experience.

The container of the gas ship was strong. Fabricated from beryl alloy it bulked like the grand daddy of all giant fish ; immense, looming, crushingly overpowering. The frame was not complete ; gaping eye sockets showed where observation ports were to be fitted. He guessed that that was where Dinar would come in. Turbo flier motors were fitted aft, with simple steering controls. Keston was not interested, for the moment, in those familiar objects. He directed his attention to the weird and outre contraptions along the belly of the ship.

Lansing sensed his thoughts. " The aquasphere, my dear Keston," he said with soft seriousness, " is capable of supporting a body as massive as the gas ship. I doubt that above or beyond the sky we will find anything to support us. We will be chained to the ground—that is, if there is ground there."

" I saw mountains—"

" Yes, Dinar. And where there are mountains there may very well be land from which they spring. At least, so it is on this side of the sky."

Keston's pulses quickened. These concepts were being bandied about with an almost reckless freedom. *Two* sides to the sky ? And yet, why not ? Superstition, fear, religion, had kept men's eyes and brains fixed below ; surely there was nothing sacriligeous in supposing that once through the sky another *place* might be found ? Lansing and Dinar had no compunctions.

" To punch clean through the sky . . ." he said. And then he banished the wonder of that thought and concentrated on its accomplishment.

" We are calling the gas ship the *Turtle*," Lansing told him. " Just exactly when the last turtle swam in the aquasphere is a matter of heated argument. Certainly from the levels at which their shells and fossils have been excavated it must have been several millions of seasons—"

" But the ground levels have been subject to titanic convulsions," Dinar broke in, ready to battle on the old and familiar ground of the correct time sequence to be assigned to the myriad life forms of past ages, preserved through the seasons as fossils. " Latousec says from the specimens he recovered on Shan Reef that the last turtle swam at least five hundred million seasons ago—"

" Who can grasp that sort of time scale ? Anyway, it does not matter. At least, Keston, you can see at a glance why we have called the ship the *Turtle*."

" Yes." Keston ran his eye over the protuberances appended to the keel of the ship. Now, once the clue had been given him he could deduce their function.

Then he found himself embarrassed. " What was that fantastic theory evolved by Latousec ? Something about the turtles always going to reproduce—"

Lansing nodded wisely. " I see you have not lost your finning ability, my dear Keston. Yes, there was more to the choice of name than the mere fact that turtles possessed four legs. Latousec suggested that from fossil imprints held and preserved in compressed rocks that had been mud when the prints were formed the theory that the turtles had the power of breaking through the sky."

" Little publicity was given to the report," cut in Dinar. " Latousec was nearly chopped by a mob after his first and only lecture."

" Yes." Lansing laughed quietly. " I swung a mean sword in those days. Lorim and I covered Latousec's back when we broke from the hall." He sighed. " Ah, well. Lorim was chopped in turn by the damned Zammu a few seasons later. Life goes on, life goes on."

" And you have remembered his work all along," said Keston, realising afresh the many facets to the dedicated scientist in Lansing.

" Yes, well," brisked Lansing. " There you have a gas ship equipped with not four but sixteen legs, like a super turtle. Perhaps we shall see if legs can break us free of the sky." He paused, then added ; " I mean by that, of course, carry us through the sky."

Both Dinar and Keston were staring at Lansing. The slip of the tongue had been so pat, so effortless, that it opened up vistas of dizzying surmise. Had Lansing then other, hitherto undreamed of information ?

No further information to support this disturbing theory came to Keston's notice in the hectic days following his introduction to the first gas ship in the world. He met the other three adventurers who were as keen and full of bounce as Dinar. Of them all only Keston was filled with doubts. And these, as befitted his resolution when he had seen his regiment march away to the front, he suppressed as well as he could. The task with the increasingly bad news, was not easy. The Zammu were everywhere, in strength that hitherto had appeared impossible.

Within the hull of the gas ship and cunningly bedded down against possible shocks had been built a compact yet versatile laboratory. Enough experiments could be carried out there to determine beyond possible doubt just where the gas ship might be once she had burst up beyond the sky.

Alongside the laboratory and the isotope-powered motors which drove the sixteen legs in a pulsating rhythm very comical to watch as they pounded back and forth in the limped aquasphere there lay the algae tanks. These guaranteed a continuous supply not only of oxygen but of the raw material with which much of the staple diet to which they were accustomed could be manufactured. And Allaree, as it turned out, besides being a competent biochemist, was a charmingly efficient cook.

Apart from that, and the quick supposition that she would make an excellent mother for some man's children, Keston had little time to spare in gallantries. She was tall and lithe and with hair that flamed to gold when the lights showed its natural colour. Her figure, usually cloaked in the traditional female trailing garment, had caused him to blink—once, and then to banish that sort of frivol altogether.

Shena, the other girl, a quiet-eyed, calm and highly-trained philologist, together with Hallam, the engineer, completed the crew. They were all doubling and tripling up on tasks, performing crew-functions that normally—if there was anything about the *Turtle* that could be called normal—would have been undertaken by a fair-sized crew.

Days of equipping the *Turtle* dragged, yet though they dragged only one after another each was crammed with frenzied activity. Provisions, arms, maps, scientific equipment, recorders, a whole welter of paraphernalia was thrust within the stout hull and found some sort of resting place. The ship took on the look of an overloaded stall in the Open Aquasphere Market, stinking to high sky behind the turbo flier berths.

On the day they took her for a trial flight, Keston had difficulty in refraining from shouting : " Let's go now ! Let's cut this shilly-shallying and start now—at once ! '

He had a good idea that the others felt the same. All except Professor Lansing, that was. He fussed like a broody shark over her young.

" Heat," he mumbled to himself one day. " We must have adequate refrigeration—" So that was attended to.

" Light," he said. " We must assume that the Great Light which so nearly blinded your assistant, Dinar, would also do the same to us if we gave the chance. Filters." So that was attended to.

" Lubrication," he grumbled. " If there is no aquasphere, only a thin and ghostly mist of gases, we must provide proper lubrication for the ship's legs." So that was attended to.

And all these attentions took time.

Throughout the fabled city of Nablus the hospitals were filling. Wounded men, finning wearily back from the front, arrived in a steadily mounting stream that threatened to tax the resources of the entire medical and surgical faculty of the city's health services. Keston although bone weary managed to scrape time to visit men of his own regiment lying with pseudo cheerfulness in their ranked ward hammocks. He listened with a grim, set face to their stories.

Significantly, no prisoners reached the city.

Keston was realist enough to know that prisoners were being taken ; but he knew, too, as a fighting man that all their information could be sucked from them long before they need be transported back here. No one cared to contemplate the terrifying prospect of a prison pen of Zammu within the sacred city's precincts.

All across the wide-flung metropolis the watch fires burned. Deep-buried beneath the city's heart the nuclear power reactors worked at full stretch, providing power and heat, recharging gas guns, priming atomic shells, giving a purpose and a direction to the myriad activity in the levels above.

Unobtrusively the daily news plastics began to publish a certain figure. Under the heading ' Fathoms ' the figure expressed the height from the tallest tower of Nablus to the edge of the silver sky. With a slow and remorseless contraction the figure shrank and with its shrinking concentrated the awful weight of fear lurking in every man's mind.

Of what price the Zammu, that figure seemed to ask, when on an accelerating curve I descend to zero ?

And yet despite the twin pressures bearing down on the people of Nablus there was no orgy, no abandonment to saturnalia, lust, drunkenness, licence, no slipping of the casually believed in yet tenaciously held moral code that had built the Empire of Goldenzee from the ruins of the silted-over Frangian Empire of two thousand seasons ago. Men were Men. They would stay Men—despite the Zammu, despite the Hopeless Ones born to them through the evil power of unwanted mutations and—a flickering hope—despite the shrinking of the silver sky.

" You might as well," Professor Lansing said with impatient scornfulness, " try to persuade me that the breathless-winged-ones are still what they were once believed."

Hallam, the engineer, a young, earnest scientist who regarded Professor Dinar as some sort of elder being, looked uncomfortable. They were sitting and finning in the control room of the *Turtle*, checking through their various positions.

" The two propositions aren't on the same level," he said quietly. " We are far enough advanced to understand that the breathless-winged-ones are not the spirits of the dead, breaking back through the silver sky to punish and terrorise we humans alive in the world—"

" Yet that was a firm belief for thousands of seasons."

" Speaking personally," put in Dinar, lolling with a flick of the fins above the forward observation ports, " I support young Hallam. The case of the Hopeless Ones bears no resemblance to the discredited beliefs of our ancestors."

" But it does." Lansing was stubborn. " You have proved that ancient superstitions are unfounded nonsense. But you have not proved that the law is in the same category. I say, and I shall continue to say, that we should have no truck with the Hopeless Ones." He snorted in disgust. " That they breed and live out on the far ranges at all is a disgrace to us ! Weakling parents who couldn't bring themselves to kill their

blasphemous offspring as the law demands should be severely chastised—"

"If you can find them." Allaree sat placidly, watching the interplay of emotions.

"Out there beyond the frontiers," spluttered Lansing. "Thousands—probably millions—of nightmare creatures which came from the loins of Men ! It is nothing short of monstrous. Scaley-hided horrors, web-footed half-men—why, if they're allowed to proliferate do you know what will happen ?"

"Yes." Keston rose and flew towards the exit. "They indicate that Man will revert to a fish—" And he finned out.

As he went he heard Lansing say triumphantly : "So I say we should not seek them as allies. They may kill and be killed by the Zammu. Let them. We fight them both."

But allies, allies of almost any sort, would be desperately welcome now in the Empire of Goldenzee.

The Fathom figure in the daily press was shrinking to a numbing quality of horror. The Zammu—or the contracting sky ?

Money, the brightly glittering metal chips that had once meant so much, were now as a broken handful of coral, and under the Emperor's beneficial administrators no one went hungry, no one went cold down in the deeps, all sources of supply were controlled for the common weal—yes, Keston decided with savage mockery, the sacred Empire of Goldenzee was all smooth and ship-shape and neatly on parade for its final dissolution.

The tearing desire in him to visit once again the old homestead and to prowl the familiar reefs and fields of Ochiltree was a live ache demanding all his willpower to control. Only the numbed realisation that Ochiltree could never again be as he remembered it held him chained fast to sacred Nablus. The dread touched him with chill fingers—Ochiltree might already have been swallowed up by the sacred, dappled, mocking sky.

He stared up, past the highest levels, stared into radiance-shot blueness where fish flitted and men finned about their business, and shuddered to think how soon he would be able to discern the pearly-grey, silver-veined, laughing, tumbled, hateful silvery sky.

six

" Ignore everything, Hallam, and bear straight on. We must put the outlying piquets behind us before nightfall."

Professor Lansing, acknowledged captain of the expedition, gave his orders in a firm voice. They all knew and understood the reason for haste. Starting out in a wild dawn, with the aquasphere reaching in fingers of pounding power even down to the upper levels of Nablus and bringing disturbance and structural strains and worried looks from city engineers, the *Turtle* must clear the fighting lines of the men from the Empire of doomed Goldenzee.

Once beyond that beryl hedge they would be penetrating perilously into the untamed aquasphere, piercing through the areas claimed by the Hopeless Ones, by the Zammu and by all the fearsome hordes of savage fish escaped from domesticity ages since. Keston had protested. " Why not," he had said, " why not head for the buckling edge of the sky where it lies within the power and jurisdiction of Goldenzee ?"

But in face of the others' protests, Lansing had held stubbornly to his own orders, and now the *Turtle* drove on through the blue dimness, heading for an adventure that even the beryl-nerved Keston did not dwell upon for too long.

He sat up alongside Hallam for a time close to the gas gun turret set in the deck of the ship. At any moment of danger, that was his post. As of now, with the ship cleaving the aquasphere and with the turbo motors purring sweetly, he had time to look through the observation ports. There was nothing to see. The *Turtle* bore on, and still Keston sat there, hunched, not moving his feet from which the swim fins had been removed wondering if he would ever again see golden Nablus and the ancient homestead of Ochiltree.

The Zammu operated a type of audio search gear similar to the rig installed in the *Turtle* ; Keston could only hope that the gas ship could slip through unobserved.

Behind him he could visualise the far-flung lights of Nablus slipping away, dimming and guttering, sliding into the encompassing blueness, becoming as one with the lambent enveloping mist. He did not bother to look back. In him skulked a deflation, a feeling of lassitude and anti-climax. In face of a whole race, a whole world seeing before them utter extinction, what could these four men and two women aboard their fantastic craft hope to achieve ? Of what importance, after all, was it to pierce through the mystery of the shining silver sky ?

Allaree roused him after a time and they ate. The *Turtle* soared on. At regular intervals they passed parties of fighting men, coming and going, and presently the activity was stepped up so that soon they were threading their way among masses of infantry, all floating supinely in the manner of infantry, awaiting to be told where to fin next. A few fighting turbofliers and larger cruisers and a handful of artillery passed. Keston took a professional interest in all the activity outside the hull of the ship : but even so, he could not throw off the cloak of ineffective onlooker that suited him so ill.

Some time elapsed before he realised that they were not going to pass any more fighting men of Goldenzee.

They were out on their own.

At once, perversely, his instincts of conflict aroused and he clambered up the narrow turret and swung the gas guns experimentally.

Designed to operate in the theoretical absence of the aquasphere—a topsy-turvey concept, if you liked !—they could yet function drastically in the normal world, and Keston felt a sadistic desire for Zammu to rise up, belly white and glistening, before his sights. The heavy metal bolts would rip through that alien flesh and blood like a reaper harvesting weed.

Gradually, he realised that the day was drawing to a close. The light fell with lessening power through the misty levels ; the blue veil subtly changed, shifting through the end of the spectrum, dropping into deeper and deeper indigo, shadowing into positive blackness unrelieved by a single mote of light. Lansing did not switch on the ship's internal or external lights. They drove on, a blundering metal monster, one with the blackness.

Over the next meal, Keston could not refrain from saying, crouched with the others in the inner cabin, windowless, where a dim illumination showed him their hands and the gleam from eye and teeth : " How can the scientific way of life be reconciled with the sword ? I am torn—wrenched apart. I want more than anything else to accompany you on this trip ; I am here, willingly going—and yet, again more than anything else I want to be with my regiment, weapons in hand, fighting the Zammu. Can you explain it, Professor ? Can you give me some guide, some idea why it is that two opposites struggle so fiercely in a simple man's breast ?"

Lansing was not disturbed by this uncharacteristic outburst. He must, Keston realised dully, have been clinically observing his assistant and following the shifts and turns in his emotions. Now the professor said : " The answer is not simple, my dear Keston. I, too, once upon a time, swaggered my fins with a sword at my side. But then I began to see that the sword is useful only when it is serving some noble purpose—and in my instance that purpose was the dedication to science. It may be that we will have to fight before we reach our goal. We may have to kill. Yet if that goal is reached and our scientific enterprise is crowned with success, then the sword will have served its purpose."

" But you're just putting forward the theory that the end justifies the means," objected Allaree, her mouth full of processed algae pie. " I thought that had been discredited."

" I think what is troubling Keston more," said Dinar precisely, " is the apparent contradiction in terms. On the one hand we have a growing civilisation with nuclear power, atomically charged weapons, turbo fliers, a mounting interest in and understanding of many branches of science—and yet we still wear swords, still carry tridents and shields and still ride tiger sharks and swordfish as beasts of burden . . ."

" That's easily seen," Lansing said casually, brushing the argument aside. " We're steadily rebuilding a smashed empire. You don't just turn easily from a shark mount to a turbo flier. It takes time, and the time scales become jumbled."

" So all right," said Keston, regretting his outburst. " If we get through to the rim, then we can start worrying. I take first watch, I believe ?" He rose, finning instinctively to avoid half-seen obstructions in the crowded cabin. " I'll just go up and relieve Hallam at the controls."

As he flew out he felt that the others would be discussing him. Strangely, that did not disturb him. Allaree, alone, had seemed to understand what was troubling him.

He told himself that this unease, this lurking fear, had nothing to do with the enterprise upon which they were engaged. Breaking through the sky . . . No, he trusted that he was not afflicted with the supernatural fears. But, still . . . He would be glad when it was done.

When he had completed his watch and slept for the remaining period of night when the Great Light, too, slept, and arose to find a blue-dim dawn seeping through the portholes, he felt

more alert, more fit, more swaggeringly uncaring of what might be. He took great care over his toilet. He strapped on his weapons as though preparing for a full-dress parade before the exalted person of the Emperor himself. He regretted that in the turmoil of the present days the Emperor had had no time to meet the members of the expedition and wish them good luck as he had promised to do. The Emperor was away on one of the fronts, deep in consultation with his generals while the mass of Zammu onslaughts never weakened . . .

Presently they all clustered in the control cabin. Steadily, the levels outside lightened, brightening with the return of the Great Light. Would they, this day, see the Great Light in awesome majesty, naked, stripped, revealed in all its mighty power to their puny human senses ?

There was a silence between them. The ground rose steadily, forcing the *Turtle* to fly higher and higher, and soon, frighteningly soon, they could see the dimpled sky up there, dancing and glittering, flashing a thousand reflections upon the firm packed sand beneath. Here was where any normal man would turn back. Here began that uneasy area of the world where the sky and the ground together sandwiched so small an amount of the aquasphere that only the smallest of indifferent fish chose to swim and chance what horrific results might accrue to such foolhardiness. And now, four men and two women were venturing where before only brainless fish had swum . . .

The legs of the *Turtle* struck the ground. Lansing roused himself. " Let in the power, Hallam," he ordered. And his voice was not as firm as it had been. Hallam obeyed.

The vibration and feeling of motion changed. Now they were rocked and rolled as the sixteen legs outside bent and straightened, seeking firm grips upon the sand, carrying them unhesitatingly onward. The motion was upsetting. Shena and Allaree paled, and even Keston felt a nausea plunging in his stomach.

" Do not be alarmed," Lansing said. He sounded alarmed himself. " We carried out ground tests before, you remember. This queasy feeling is only gas sickness. It will wear off."

Keston remembered the old legends. Of how the aquasphere moved, all in a solid body, unaccountable, first this way and then that. Of how, if you ventured too close to the buckled edge of the sky the whole aquasphere would drain away behind

you ; impossible, fantastic, fear-ridden myths, and yet stories that gripped him now in the strangeness of the moment.

He mentioned it in a shaky voice. Hallam laughed, once, too shrilly. The girls were silent ; but their hands clasped in mutual search for reassurance.

Dinar said : " The old legends. Hah ! That the bulk of the aquasphere could so move up and down—preposterous nonsense !"

Lansing did not say anything.

Ahead now lay a shelving sandy ground, trending steadily upwards at a gentle incline that, suddenly, anti-climatically, maintained the *Turtle's* rounded back some five spear-lengths from the silver sky. The legs outside clanked on, their noise a droning, regular rhythm oddly comforting.

Periods of time passed. Lansing consulted his private plastics. The tremble in his arms was marked now. Dinar kept a watchful eye on the engines as Hallam sat with the controls gripped in hands that had the tension of something to cling to and steady their tremble. Slowly, eerily, the sky crept down.

Presently Keston felt he could stand this no more. He finned upright and wormed his way into the gas gun turret.

Up here, through the vision slit toughly protected by transparent plastic produced at fantastic temperatures in the mammoth empire nuclear factories, he watched with a heavily twitching eye. He was afraid. So he was afraid. He wasn't the only one.

Now he could see the sky only by cocking his head down and peering upward at an acute angle. The dancing silver light was blinding. Incredibly, here, at the edge of the world, myriads of brilliant fish were sporting. A few weeds trailed away in the turbulence of their passage.

He sat back, his eyes smarting.

When he once more applied his eye to the vision slit he could not at first understand what it was that he was seeing.

Across the plastic sprawled a succession of spear points, silver, constantly moving, upright wedges of some transparent material that held all the fear-loaded emphasis of beckoning fingers. He started back with an involuntary exclamation.

As he watched, awe-struck, the wavering line of dancing points slid down the plastic. Bright blueness below, a brilliance such as he had never experienced before above. With trembling

fingers he pulled the filters designed by Professor Lansing into position over the plastic. At once he felt a profound shock of dismay, of disappointment, of despair.

He was staring at the same sandy floor that the *Turtle* had been legging it over before, the sand lay smooth and undisturbed before him. He raised his vision. Ahead lay a long vista of sand and then a rocky rim, small and distant, with a few tumbled weeds growing from its summit.

So they hadn't broken through the sky, after all ! They had in some miraculous fashion merely carried on travelling and were now simply crawling along the floor, bathed still in the omnipresent aquasphere. A twist of dimensional wizardry, a flash-back in time, a subtle and not-to-be-understood distortion of the known world had perhaps brought them back in a circle, so that they were now moving clumsily back to their starting point. He choked down the bitterness and slid from the turret, rejoined the others in the control room.

Their faces, their features, the stark disbelief written large there staggered him. Did he, then, look like that ?

Lansing said in a choked voice : " Comrades—we have left the sky behind us."

Keston said: "But that is impossible—" Then he followed the gaze of the others, and turned, and look backed through the rear ports.

A picture he could not understand . . . A scene for which he had no words . . .

Brightness. Infinite distance. A vertigo, seizing him, making his eyes dizzy and his brain spin. A smooth, shimmering veil, spread out all over the ground, split by vagrant shafts of light, green and blue and silver and gold. Blueness above, unthinkable, remote, tremendous blueness. And, in that blueness gigantic monsters of white, formless, groping, piled as though by the maniacal hand of a madman playing with current-cast sand. He swallowed. He had no words. He had no brain to weigh, to assess, to measure. He had only eyes, to see and marvel and fail to comprehend.

Lansing rustled his plastics. His face held now the fanatical glow of a man whose wildest dreams have come true. He was elevated, possessed, driven by a force that had given him no rest—and was now demanding still further efforts.

" We will leg it up to that rocky crest," he said, his voice shaking ; but shaking now with elation and wild surmise. " We will then stop and look about. What we may see . . ."

The *Turtle* crept over the sand. Now Keston felt that the motion was more rapid, freer, as though some clinging weight had been removed. In this brilliant place above the sky perhaps everything was insubstantial, ghostlike, not bound by the normal earthly values obtaining in the familiar aquasphere that must now lie beneath them ?

Lansing gave the order and the *Turtle* stopped. They peered over the ridge.

A cry of utter amazement, of sheer disbelief, burst from Keston.

Directly ahead lay a mass of weeds, huge weeds, thick stemmed, and growing directly upwards, sprouting into tufty heads that were still and silent and without motion. He felt he was going crazy, adrift now in this impossible *place*.

" Note that there are no currents here," said Dinar. " What you would expect in a thin mist of gases." He glanced at Hallam. " We'd better check the packing. If the aquasphere inside starts to leak out—as it must do—then we will be in trouble."

" Aren't we now ?" said Shena unexpectedly.

" No, my dear, we are, not," said Lansing. He was recovering rapidly now after the experience. " Now, all of you, please gather around me." He spread his plastics. " Here you see a map. It was drawn up by Doctor Lorim—"

" Who was chopped by the Zammu after Latousec's lecture ?"

" The same. He wanted to prove Latousec right. He found strange facts on his travels and passed on to me before he died details of his discoveries. Briefly, he discovered the ages-dead ruins of a city, close to the buckled edge of the sky. In all the confusion of warfare and empire-building and Zammu fighting that has gone on, this information was only too easy to keep secret. That city should have been passed over by us in our passage—"

" But we didn't . . ."

" Precisely. That city has been engulfed by the sky."

Keston looked uneasily through the viewport. The shadows of objects, he saw, lay thick and hard and unmoving. No one so far had broached the single topic that, it now seemed, had still the power of frightening them. No one had yet suggested coupling in the viewports that would allow them to see directly above them . . .

" This city, like so many that we uncover in our archaeological digs all over the ground known to Man, was not one but many cities, each built upon the ruins of its predecessor. Lorim dug through twenty strata, and found many hitherto unknown artifacts, devices that have been lost to us and some which are being laboriously rediscovered."

Still no one wanted to look upwards . . .

" When he had reached back in time so far that all figures lose their meaning, he had still not reached a city that had been built when the last turtle roamed the aquasphere. Their fossil remains lay in even lower horizons. But he persevered. On the thirtieth level he—" Lansing paused. He finned a refreshing current across his face.

Well, were they going to take a look upwards ?

" Lorim, you must remember, carried out this work according to a strict archaeological regimen ; he rushed nothing. So it was that at the thirty-first level he realised that he could not carry on at his regular rate and achieve success before he would be forced to return to Nablus for supplies. The aquasphere deals harshly with artifacts left exposed. The protecting silt and mud covering the vanished cities preserves them for all time for our inspection—"

And, fumed Keston, are we to sit here for all time listening to this ancient tale of dead cities when outside lay—lay what ?

" What is the relevance of this ?" asked Dinar.

" Simply that the city excavated by Lorim lies ahead of us. My measurements—if my maps are correct—show that we have broken through the sky where when Lorim was here the aquasphere stretched—"

So there it was. Now they had to think. Keston finned up and reached for the control catches on the upward view ports. He turned to the others. Lansing swallowed, and nodded.

Keston opened the ports.

A bar of brilliant golden light struck down, shaped like the port, struck like a sword, splashed fire in all their faces. Instinctively, hands flew up to cover eyes.

When at last Keston peered out he saw the strange and clear blueness extending and—he staggered back, dropping to the deck of the ship. Daggers of fire clawed his eyes. Chips of flame flashed in his retinas. He was blinded, in agony, shaking all over and more frightened than he had ever before known in his life. He groped desperately for comfort and reassurance in the cabin of the ship.

" Evidently my assistant did not learn from yours, Dinar." Lansing swung the filters into position. Some long time after that Keston again looked out. The blueness was dimmed to a deep violet and in that violet field swam a monstrous, single, inflamed eye. He stared for a very long time.

No one could explain what a single ball of flame was doing suspended in mid-nothing, and no one, for the moment, tried.

But Keston felt a weird elation in him. He had seen the Great Light !

For that, without the shadow of a doubt, was what that single lambent eye of light must be.

seven

In their confident struggle to rebuild a shattered civilisation from the ruins of the Empire of Frangia the people of the Empire of Goldenzee had adapted, turned to their own ends, a gnosis that incorporated belief in life after death—as witness the fantastic idea that the breathless-winged-ones were the spirits of the departed dead—a reverence for the older beliefs and an understanding that beyond the silver sky lay the Great Light, whom or which no one would see this side of final dissolution.

Now Keston was seeing the Great Light at first hand, face to face. No wonder his blindness had been so painful, no wonder he felt like a shrimp, clicking along in the shadow of a barracuda.

" And is this all," Professor Dinar was asking vehemently, " that we have dared for ? To burst through the sky to seek a lost and forgotten city ?"

Professor Lansing was not perturbed. " That—and other things, my dear professor. Already our laboratory has turned out enough riddles to last our colleges many seasons. No—I feel it much wiser not to tell you just what this city means until we have found it and reached down again to the thirty first level."

And with that, they had to be content.

The *Turtle* rumbled on over the strange ground. Nothing moved outside. Weeds remained upright, shivering occasionally, the ground maintained a perfectly firm appearance, completely lacking the shifting streaks of colour and liquid reflection so typical of the normal world. Every now and then

one of the mysterious white monsters high above would sail between them and the Great Light. Keston felt a touch of blasphemy then.

Looking out he was continuously struck by the impossibly infinite depth of vision. Everything was incredibly tiny—he had at first thought that his eyes had shrunk when he had observed the distance and the curvature of the *Turtle's* hull. Out their in a gas suit, he felt, he would be reaching immense distances for the most near and trivial objects.

He remembered standing perched on the topmost tower of Nablus—breaking the law into the bargain—and thinking how far he could see. Now that experience receded. It had the remembered effect of being in the centre of a confining globe of light, with details more distant than about thirty fins vague and formless and undefined. Now he would not care to hazard a guess as to the number of fins distance he could see. In that abnormal vision the ruins took a long time to reach. They were scattered about the plain before the *Turtle*, grey, sharp, unthinkably ancient and—and pathetic.

" That is where Lorim pitched camp," Lansing said, excitement making him hop from port to port. No one wore fins inside the ship ; had they done so Lansing would have bludgeoned someone in his enthusiastic violence.

The *Turtle* crawled like a monstrous crab up to the depression in the sand. Shattered walls of metal reared everywhere. At irregular intervals widely-opened excavations gaped, dark and blackly inviting. Even through the filters light bounced in cruel fangs from the metal, showed it to be scarred and corroded. The strangest item to Keston was the lack of smothering weed. Back in the normal world any ancient object would be smothered in weeds and shellfish and all the myriad life forms battening on decay.

" Well," Lansing said. And paused. Keston smiled.

" Me."

Allaree raised one hand in an involuntary gesture.

Lansing smiled and patted Keston on the shoulder. " We two."

So they both donned gas suits, checked that their own portable supply of aquasphere was functioning smoothly within the suits, and entered the lock. Hallam checked, calling out reassuringly. The valves closed. The aquasphere was pumped

back into the ship. What lay around him now, Keston had no desire to dwell on.

The outer valves opened, and he stepped awkwardly through, wanting always to lean forward and fly out. Like the *Turtle*, he would have to use his legs to support him in an upright position. He felt undignified. Legs weren't made for that !

He saw Lansing stagger and collapse and then he,too, was falling. He pushed out both hands. The ground came up with unbelievable force and rapidity. Everything was tiny and far away and bright—bright !

Like an ungainly crab, he crawled along on hands and feet, his rear high above his head, panting so that the confined aquasphere circulated through his lungs and gill-slits at an accelerated rate. Stumblingly, head cricked to see where he was going, he crawled after the professor.

The two men were actually crawling along on the ground in this *place* beyond the silver sky. Momentarily, Keston expected the sky to fall back onto him ; it would have been reassuring, at that. He tried to stand up as he would have done back at Ochiltree ; each time he felt himself falling. In the end he gave in and crawled laboriously after Lansing.

How like life, he thought crossly. Strip away superstition strip away your own fears and venture out onto a great and glorious expedition into the unknown, pry past the barrier set by nature with the magical aid of science—and what did you end up with ?

Two red-faced men crawling along on their hands and knees.

With the aid of the mechanical cutters and grabs and shovels swinging from derricks on the exterior of the *Turtle* they dug their way down into the buried cities. Every now and then someone went outside in a gas suit to superintend some finicky operation ; but this frolicsome exercise was kept to a minimum. Keston had at once protested his teacher's barbaric attack upon the site. Lansing had simply said :

" There is no time left, Keston. No time ! The Zammu are destroying fabulous Goldenzee whilst you prate about the proper archaeological digging system. We must find what Lorim talked about in his last delirium—"

" What *do* you seek, professor ?"

" When the shovels strike a substance through which they cannot cut, I will tell you more." Lansing was looking tired. " I scarcely credit the theory myself. I must be sure that what

Lorim said—what I have until now fervently believed—is indeed true. Yet the nearer we come to testing that truth the more undecided and disbelieving I grow."

Allaree, smiling, said : " That's just human nature, professor."

Hallam glanced across the control cabin. His face was set. " The cutters are whining off a surface they cannot pierce," he said.

It was the catalyst.

By the time the others had assisted in scraping away the peculiar ground and uncovered a sloping wedge of the object, Lansing had rested and regained his usual urbanity.

Up here, wherever here was, the ground had no cohesion ; it slipped through mechanical fingers and fell straight and unpluming, oddly disturbing. Scraping away the hard-packed earth, they marvelled at its brittleness. There was an absence here, a lack of something with which they had been so familiar throughout their lives that they could put no name to it.

They clustered at the viewports.

From the angles of the curve, Hallam and Dinar calculated that the dome formed a perfect hemisphere. The material of which it was composed defied their means of analysis. Dinar was not sure, even, that it was a solid material, and talked to himself of semi-solid states and lines of force and magnetic cages. The others left Dinar and Hallam to work on the dome, and contented themselves with looking at it. It shone, dully-grey, sheening still through the millions of seasons it had lain here, covering—covering what ? Lansing sat down, finning limply, elated, yet calm and scientifically triumphant.

He said : " Lorim, then, spoke the truth. He spoke of this featureless dome of metal—or of whatever material it turns out to be. Lorim could not decide, either. But he did not have the advantage of having with him Goldenzee's foremost physicist."

Dinar grunted.

Keston wondered whether or not the compliment was a trifle late. Dinar, he felt, would have preferred to have been told the problem before setting off, so that he could have brought any special equipment he anticipated he would need. He might, too, have begun to form theories—but that was always dangerous. Maybe shrewd old Lansing knew best, after all.

As though fully understanding these thoughts, Lansing said with a little smile : " I could not tell you before, my dear Dinar, for a number of reasons. But the chief one, I think you will readily see, was that I simply could not be sure that this great dome existed. It could have been a phantasm, conjured up in Lorim's mind, excited as it was by the potentialities this discovery led him—and us—to consider."

" Nothing can be certain up here," Dinar said, not taking his eyes from the dome. " Except uncertainty."

Hallam's expressive face was alight. " The potentialities you mention . . ."

" Must by now be obvious to you all."

Dinar swung round, sending currents swirling.

" It is my considered opinion that this dome is more than mere metal. We know it to be unthinkably old. I doubt that untreated metal would have remained intact over time spans of this order and so I assume that an energy source exists which creates a field of force within, or about, the material to provide a continuous support. We have played with such things in the nuclear labs—"

" One item, there, my dear Dinar." Lansing's face shadowed. " When Lorim reached the dome and removed, as we have done, the overlying silt and rubble, he said that he stumbled across a crack, a fissure, in the surface. And into that crack the aquasphere poured with titanic force."

" A rupture of the field !" said Dinar, dismayed.

But Keston had finned beyond that.

" That means— he began.

" You all understand what that means ?" asked Lansing sombrely.

The concept, once grasped, was astoundingly simple.

" Yes, but . . ." someone said.

" That means . . ."

" The aquasphere poured in and down . . ."

" Today, the aquasphere is shrinking upon our world," said Dinar, didactically. " There is extant the idea that this may have happened in previous ages. The sky is falling upon the world we know, and yet, here we are upon another part of this globe. Might not there be a movement about the world—with the aquasphere not necessarily anchored to one portion of it ?"

" The old legends that the aquasphere breathed—"

Lansing moved a hand. " Lorim said that the force was so great that their spoil was moved back and redeposited in the

crack taking two men with it, and sealing off the fissure. Disheartened at the end of the dig, he came home—and was caught by the Zammu. Only his notes survived."

" And so we are here," said Keston in a whisper. " Again we uncover this ages old secret." He stared around at the others. " But—what lies beneath ?"

No answer to that question was to be found that day. The Great Light became veiled. Movement became noticeable in the strange tall stiff weeds. A massive darkness spread over the world. Into that darkness, hurled like flung harpoons and blazing with some elemental wrath, shafts and lances of fire scorched across their retinas. Noise bellowed down from some unknown sphere. Even though sound travelled here at only a quarter of its normal speed they were bewildered by the crashing crescendos of sheer volume.

A few scattering drops pitted the ground with round dark splotches. No one ventured to guess what they might be. As soon as the Great Light reappeared—to Keston's heartfelt relief—the strange dark dots vanished.

Brushing all these eerie scientific manifestations aside, Lansing pushed on with excavation of the dome. Their stay above the sky was limited ; the great deeps and the battling city of Nablus called.

Daily as the work progressed Dinar grew more and more irritable. The trouble was, that his work did not progress, and that he felt himself responsible and lacking in some vital fashion in the eyes of his comrades. Clumsily, Keston tried to reassure him and had his head bitten off in response.

During the short nights they often tried to work out what those far off—or quite near ?—firefish were. They did move, in a great wheeling arc all across the—well, Keston had to face it—across the sky. If they had broken through the sky into this *place*, then what was above here must be this *place's* sky. No other great radiance lit the night sky apart from those myriads of tiny chips of light all during their stay, nothing else shared this uncanny region's sky with the Great Light and the swarming firefish.

They found the crack reported by Lorim. They scraped and shovelled away congested earth and rocks. Staring down into the fissure and allowing his mind to roam ahead of his body, Keston was besieged by his familiar twin-devils in emotions.

He both wanted to retire hurriedly, not to go down into those black depths and hide away from the fear he clearly sensed rising from the pit like ink from a cuttlefish and yet, at the same time, he was eager, anxious, recklessly wanting to descend and to pry back the millions of seasons, to open up a window onto the past ages. There was only one course open to him and that he knew well enough and so he threw off any thoughts he had about not going down.

That was what they had come here for, wasn't it ? To go into whatever lay beneath the dome and rend away the secret of its construction.

" We must get in," Dinar said emphatically. " If we are to create our own domes then every portion of the technology used must be fully understood. It goes without saying that the thinking involved here is in advance of our own."

" Does that mean, though," asked Allaree, " that we may not ever be able to understand how the dome was made ?"

Hallam answered, as usual backing up his chief. " Oh, no, Allaree. But it does mean that we will have to copy everything exactly. Until we fully understand how to make a dome, we are like children, following the instructions of their teachers and creating objects for which they are not fully responsible. But, one day, we will understand just what we are doing."

Lansing moved about with his demeanour of hard purpose showing starkly through the facade of the kindly, bumbling old professor. He contained himself with difficulty against the delays and the frustrations.

" We have come here on the chance that Lorim's reports were accurate. They were. Now it is all up to us. Nablus, Goldenzee, our whole way of life, rest squarely on our shoulders." His face was animated. " I look forward to the day when the first dome goes up over Nablus ! Then we will extend outwards and at each fresh advance the Zammu will be pressed back and back until all the aquasphere once again rightly belongs to mankind !"

It was a grandiose, a wonderful and yet so commonsense a vision that Keston felt that it must succeed, come what might.

Dinar and Hallam worked out between them the best method of approach. By descending the fissure and advancing in a straight line they calculated that they should reach the exact centre of the hemisphere. Dinar was confident that there, a that spot, they would find the energy source that maintained the dome through the millenia.

The two girls were quite prepared to stay with the *Turtle.* Nothing had been seen that gave any alarm—alarm, that is, on the purely physical level. A few breathless-winged-ones sailed past overhead from time to time ; but the gas ship's guns could take care of them if the need arose.

Crawling in his gas suit towards the lip of the fissure, Keston wondered why he'd strapped on his sword. The dangers they were facing would not be those a man could cut into with a keen edge or thrust with a point that would settle the question, finally. Only when he was waiting to go down was the answer given him.

He was going into unknown dangers, facing hidden terrors, fighting a battle that his comrades of the Emperor's watch-sharks would never know. He needed the reassurance of their intangible presence, the comradeship with them in the hour of strife. And the sword was a sacred symbol, a symbol of the best in life, striving through turmoil to the peace that might lie beyond.

eight

At last Keston stood on the rim, balancing precariously with grasping hand-manipulators, staring down into remote and shivery blackness.

He was not looking forward with the same zeal to this descent as he had to the ascent above the sky. They had risen to pierce beyond the silver sky ; it seemed foolish and topsy-turvy now to be venturing down into the depths again. There was something cold, illogically primitive, about this voluntary descent into solid earth and rock.

And yet—it wasn't solid, was it ? Lorim had reported that the aquasphere had flowed strongly down until choked off. Keston adjusted his helmet light, glanced across at Lansing and then began the precipitous descent.

Again and again he wished that he was descending this cliff of rubble in the aquasphere ; then he would have dived freely, joying in the experience. Now he had to slip and slide a few fins' length, grasp a projecting boulder, let himself go on again, fetch up against a sheet of metal, curved, extruding from the debris. Then, again, the cautious heart-stopping descent could begin to bring fresh dangers. He lost all count of time. Lansing followed closely with Hallam assisting Dinar a few spear lengths in rear.

Shaking with reaction, Keston at last reached a broad and sand-strewn area which their lights failed to reveal in its entirety. They all looked about.

In the strange absence of the aquasphere their lamps threw bewildering lances of lights in which silvery motes gyrated like frenzied reef fish. All about stretched eerie shadows, looming and half-seen masses of debris and wrecked machinery, the hint of the work of titans, and at their backs soaring away the slope of rubble down which they had so painfully crawled; the scale was enormous.

They began to crawl across the ground which was littered and craggy and which puffed up in billowing spurts of the all-pervading crumbly detritus. The fever of exploration gripped Keston and he marvelled that staid scientists could still experience the pure and unalloyed thrill of reaching past the frontiers of the known even when their whole world was threatened. Without the shining prize of the dome technology to be unearthed, he knew that they would still experience that urge for discovery ; it owed nothing to any consideration of reward. The four men fell into a frenzy of discovery and a high elation of adventure. Time passed.

This had been a city. That, at the least, they could determine. That it had been like no city understood or even envisaged by Keston did not enter the matter for he knew that in some distant and forgotten time long since choked with the weeds of decay and ruin, men and women and children had flown through these streets, had lived in these blocks of houses, had made love, lived and died.

Even their rough, preliminary estimates of a date astounded and awed them. So long ago, so long ago . . .

Then Lansing shattered those comforting illusions.

They touched helmets, relishing this alive human contact in that city of the past, there beneath the broken columns of a titanic arch, and Lansing's voice vibrated in Keston's helmet.

" This city is one unknown to men ! Men have never lived here. Look at the architecture. Look at the way the place has been designed, run your eyes along the street facades—where are the balconied doorwindows allowing ingress conveniently at every level ? Where are the turbo flier landing stages—those flat roofs there appear strangely different—"

" You must expect a difference," objected Dinar. " This city is *old*." But the eerie acceptance of the truth of Lansing's statement rang hollowly in his voice.

" I see what you mean," Keston said, slowly. " These people lived on a monolevel. They could not fly freely through the aquasphere as we do and so they built their city differently —those levels there with many little floors one above another—you could crawl up those if you were chained to the ground by gravity as we are now . . ." He stopped, horrified by what he had said. " *As we are now* . . .!"

" Yes." Lansing was wearily triumphant, as though having finned a long hard race. "The people who lived here could not have been men. Lorim said the aquasphere flowed in. So that means that they were living above the sky before the aquasphere moved across as we speculate—"

" But how did they breathe ?" demanded Dinar, the physics man.

" Think of the breathless-winged-ones—"

" But they fly."

" These people, long since dead and gone, must have breathed too, and not flown—"

" Amazing !" said Hallam. He looked about, uneasily.

" Dead and gone," breathed Keston. " Their bones mouldering in the eternal ooze." Then ; " But there would *be* no ooze."

" Precisely." Professor Lansing's voice trembled. " I would dearly love to uncover fossils. Their physiology must have been wildly variant from ours—we can barely move about here, crawling and scrabbling like undignified crabs. What system of locomotion did they possess ? What were their faces like—if they had faces ? Weird, bizarre, different—and yet still a mere product of this Earth." He would have gone on ; but the monstrous idea had occurred to Keston and he could not keep it down. He voiced it now, conscious of its enormity.

" We have often speculated where the other races of intelligent beings have come from," he said, diffidently and yet with angry purpose underlining his words. " The octopoids we know evolved in far-distant reaches of our own aquasphere-covered land. But what of the Rat-People ? The Hermaphrodilia ? The genus of the Corporate Entities ? Maybe they originated here ? Maybe, even, the Zammu—"

The idea shook them all.

" It's almost unbelievable," whispered Lansing. " But our concepts are being overturned continuously since we broke through the silver sky. Maybe this *was* a city of the Zammu. Maybe they *did* evolve so that they could live in our normal world.

" It might account for their deviltry," growled Dinar.

Keston felt the bilious fear in him. Ghostly essences reached out with groping fingers to pluck at his nerves. He laughed, a short, savage, self-conscious burst of sound.

"Whilst I am still a thinking man and can wield a sword I will not fear a thousand-million seasons old ghost. Come on. The centre should be along her ."

And he broke contact and led the shambling advance through the crumbling city.

How long it took they could never be sure ; but they found the decaying heart of the city, and stood propped against shattered archways, marvelling and amazed, filled with awe. That the entities who had built here had built well the dome testified and whoever or whatever they might have been, they seemed now to congregate about the four men, huddled together in converse and huddled, too, against the unknown. Dinar and Hallam threw off that oppressive feeling of being overlooked and set about the task. They found the energy source located in a plain, simple and intact building set at the junction of eight streets.

More than that they did not find out.

They could not enter the building.

It stood, enigmatic, serene, undisturbed by the passage of time and the long precession of the ages.

" It must be the place," Dinar said. His voice rang hollow with disillusion in the helmets. " Everything points to that building holding the key to the domes—"

" And to our future protection against the Zammu," said Keston.

" And," Lansing said mildly—so mildly that Keston broke contact for a moment so as to look closely at the old professor. His face was quite blank, quite unmarked, quite un-Lansing like. He went on : " If a building can stand, impregnable, for a thousand-million seasons, there must be a reason. There seems to be no way in and perhaps that is just what the builders intended. We have no tools to break in. The energy upholding the dome must come from a source we can only guess at—from deep in the Earth, perhaps ; hardly from fusion power in the lack of an aquasphere. Perhaps, I offer this as a suggestion, perhaps this building and the dome are in some way energised by the Great Light itself."

No one could find the strength to argue that now.

Lansing looked around on them, then he regained contact and said with the hint of sorrow shading his voice : " Gentlemen we have failed."

After that, for a space, they raged and rampaged at the building. Keston even beat upon its phlegmatic walls with his sword ; and then the blessed sanity of the everyday rescued him and he desisted because he was taking the edge off his weapon.

" We may have the chance to return. I very much doubt it. But we may." Lansing brisked around, herding them. " We must return now. This is not the first defeat we have suffered in the cause of science."

Keston accepted that. It was facile and—in the present situation—ludicrous ; but a man had to cling to something when eveything he had planned on had fallen apart. They were not in this thing, not so deeply committed, purely in the abstract cause of science. Fabulous Nablus and the Empire of Goldenzee lay weighed in the balance against their failure.

Defeated, dejected, they crawled back the way they had come.

A flicker ahead in the ruins arrested Keston's attention, and he stopped crawling the better to lift his head and look. Half a dozen strange grey creatures were going swiftly across the street. He had no words to describe them. They had no fins and did not fly. Beneath their bodies was a blur.

Lansing said : " I have seen fossils of the Rat People. They had large tails and webbed hands and feet—but in all else, in all else . . ."

" Let us follow them." Dinar scrabbled away, followed at once by Hallam. Lansing looked over at Keston, smiled half-heartedly, and began to crawl after Hallam. Keston had not liked the look of those strange creatures. He remembered his thoughts when the breathless-winged-one had broken through on Long Mile Reef and smiled a little as he saw how truly he had predicted the reaction of a scientist.

But he followed the others. This might turn out to be why he had been taken along . . .

In a tumbling slither of fallen masonry and twisted beams, squeezing beneath prostrate girders, slipping and sliding down mounds of unidentifiable debris, he followed. He reached an octagonal chamber, roofless, decaying, smothered with the strange gritty material in which their movements left streaky smears. He threw his light ahead.

At once his sword was out of its scabbard, the mechanical grips giving him an odd sensation as they grasped the familiar ridged hilt.

Dinar was down, a creature—a Rat Person ?—worrying him with jaws that, for all their smallness, were yet a danger. Lansing was fending off the combined attacks of three others and Hallam was kicking deperately at others as he lay on his back, flailing with arms and legs. The situation was not pretty and cast a grave reflection on the sagacity of the men. That animals of this stamp could—and then, again, *were* they animals ? Suppose the breathless-ones were in very truth the departed ones of Earth, were their spirits reborn in different flesh and blood ? Keston gripped his sword and fought away the demons that clawed at his mind.

The fight from then on was relatively enjoyable. He found that he could bring the sword round so fast that a sideways blow from the edge would cut a Rat Person in half. He stopped using the reliable point, and cut and hacked his way across the octagonal room. In moments it was all over. Thankfully, they checked up to find no-one's suit punctured. But it had been a near thing.

And then Keston threw his light upon the walls.

Lansing forgot the rapid dissection of the body beneath his grips, a body a good three fins' length from nose to rump, with a whip-like tail another two fins' length after that. He, together with the others, stared at the walls and what their lamps revealed.

Recognition that this long dead and decaying building had been a hospital was slow in coming ; the mouldering, defaced yet still achingly modern pictures adorning the walls brought instant acceptan e once they had been understood. The four lozenges of light splayed over the murals, picking out colour, detail, story.

"An allegory," Keston said, unheeding that the others could not hear him. It was all there. They made their halting way around the room, scarcely crediting that what they saw could ever have existed, and marvelling at every fresh and sudden spark of life from the past, revealed in a twist of limb, the expression of a face, or the grace of a mother cradling her baby.

They touched helmets.

There in some forgotten cavern deep beneath the crust of the world, buried by tons of earth and rock, four men clad in their

incongruous gas suits sought comfort and reassurance from one another in the time-shattered rubble of the ages-old city.

" So they were men."

Professor Lansing spoke ; but it could have been any one of the four.

" Men."

" Men with arms and legs, with heads and eyes and noses and faces, men who must have thought much as we do—men who lived here millions on millions of seasons ago—men who did not possess gill slits and who did not live in the aquasphere of the normal world."

" Yet they were like us !"

" So very like us."

No matter who spoke ; no matter who voiced the same thoughts thronging all their brains.

" Perhaps, as we speculated about the Zammu, these long gone men evolved—"

" Perhaps they are not long gone . . ."

" Perhaps they were faced with the self-same problem that faces us ; perhaps their sky was falling upon them. And so they sought sanctuary in the normal world, in the aquasphere."

" Yet this would have been their normal world."

" And the sky still exists . . ."

" So they evolved. They adapted, through directed, surgical control and irradiation bathing of the gases and chromosomes ; perhaps there was a great migration from this awful lonely *place* above the sky into safety and saneness of the aquasphere."

" Perhaps," Keston finished for them all. " Perhaps they are us."

Each man dwelt a little with his thoughts.

Then Dinar said abruptly : " A few days ago I would have found this conversation, this idea, impossible. But in face of a changing world a man must change too, or die. We believe these people changed in order to live." He lifted the oxygen meter attached to his respiratory tanks. " Our supply is dwindling. The suits aquasphere will be foul by the time we have flown—that is, crawled—out of here."

" Yes. Yes, we must leave, Lansing said with regret."

" Oxygen . . ." said Keston.

" Yes." Dinar turned his control, conserving the gas. " Ironic that in the thin mists about us now oxygen is there,

denied to us, locked away—" He stopped talking. All four men swung again to look at the murals. Depicted there were men and women and children, alike in all respects to themselves except that they possessed no gill slits.

" The Breatheless-Ones . . .?"

" If they were men then they breathed. They couldn't fly if there was no aquasphere and the pictures show them always upright, not crawling. Perhaps, then, they had another system not only of getting about but of taking oxygen. We may . . ." And Dinar's voice was lost as he began to hump himself out of the octagonal room.

The others followed. Each in his own shell of isolation, each scrabbling on hands and knees. In the pictures men had gone upright, lightly, fleetly, on their legs.

All the way back through that terrible climb, the thoughts battered in Keston's mind. He felt bemused. If the whole world was changing and growing hostile to men, then men would have to change to face that challenge, in bending to the violence of nature he would outwit her and continue a life that to him, if to no other, was of use and value and beauty.

Oxygen ?

The aquasphere, or a thin drift of gases ?

But—men had lived here. They had been men, indisputably.

Men lived in the normal world enclosed safely in the comfort and protection of the ambient aquasphere. Keston recalled what Professor Lansing, in an idle moment, had dubbed this thin drift of atomised gases. So split, so tenuous, was it he had declared, ironically, that it could be called the atmosphere.

Strange concept.

They battled their way up the cleft, leaving the dead and silent city far below, emerged at last into the radiance of the Great Light and the comforting bulk of the *Turtle*.

Maybe they had also found the reason why the ancient Law proscribed so severely the Hopeless Ones ? Webbed hands and feet or a scaley body would be of little use, out here beyond the limits of the sky. A curious, twisting concept grew in him, spiralling backwards through past time, that perhaps the Law had been framed in expectation of just such a journey ? Just such a *return* journey ?

Then, if men crawled up seeking a new world, dragged themselves from the aquasphere into this new and frightening atmosphere, who knew what wonders would be theirs for the

finding ? He looked at Allaree as he came in through the lock. With the great ideas burgeoning in him, he opened up a vision of what was to come, a clear sight that humanity could still defeat the Zammu by beating the descending silvery sky ; there would still be a life to lead and a future to plan.

His fears that in his heredity lay the seeds of the Hopeless Ones, generated in such panic when he had first looked down upon that pitiful web-footed nephew, were brushed aside now in the new wonder that was vouchsafed him. Allaree responded to the smile in his eyes and deep in her eyes the answer to the unspoken question was plain for all to see.

" We must take back samples of the atmosphere," he told her. " So that you and other scientists may work on the great metamorphosis. One generation, two—who knows ?"

" We will do it, Keston," Allaree said. " For the sake of the children yet to come, who must never be Hopeless Ones."

And then what might still be the greatest wonder of all stole upon him, so that he smiled with a great tenderness upon Allaree.

For if men prevailed and adapted and left the long seasons of development in the aquasphere behind them and ventured out again upon what once had been theirs—why, then Keston might himself, one day, again see the familiar fields and buildings and live out a life of peace in the old homestead of Ochiltree.

—Kenneth Bulmer

In the next issue of

SCIENCE FICTION ADVENTURES

Earth's Long Shadow

by KENNETH BULMER

A long complete story of the far reaches of space.

ORDER FROM YOUR NEWS DEALER NOW

We could not resist the temptation to include this interesting piece of blank verse in our pages, inasmuch as it also happens to be an interesting story.

STARDUST

BY ALAN LINDSEY

It was his moment of triumph.
Placing the final rivet in its place
And driving it home, hermetically
Sealed the culmination of his race.
All that remained, simply to adjust
The delicate instruments that formed
The brain of his creation:
The brain that made his craft
Almost alive. Forget the overdraft
That plagued him, forget the nation
Whose walls of disbelief he stormed
Incessantly, the walls of man; unjust.

All set. He made his final steps
On Mother Earth, to set for their end
All traces of his mortal life below.
He thanked the stars he sought, he had no friend.
Mounting the ladder to the open port
Through which lay his way to distinction,
His way to show the world how much it lacked
And how he had been very right
To keep his dreams within his sight.
All his provisions had been made, packed
Into the carrier of his body and extinction.
He settled on the cushions, closed his eyes, and sought

The button that would hurl him into space
And then destroy his traces down below.
The moment's hesitation. Who would blame him?
And then, decision. The first, most painful blow
Sent him speeding into the vacuum of nature
That he had chosen for his field of life.
Or so he thought. And with this burst
Of energy from all his shrewd design
His laboratory exploded at the selfsame time,
Surprising his neighbours, who never guessed the first
Man into space was on his way. His wife,
Like all the others, thought him dead for sure.

The inquest, no longer the concern by now
Of the traveller on his lonely venture,
A macroscopic speck in endless space,
Returned, the verdict, " Death by misadventure."
As far as earth could tell,
A man had died in an explosion,
The origin of which was quite unknown.
Even the neighbour forgot the day
And took not notice of the patch along the way
To their shopping centre in the nearby town.
And how about our traveller, in his motion
Amid the stars, cooped in his metal cell,

What of him? He has not too much time
To think of how he is lonely in the void,
But makes his notes and steers his course
For any world. He has not even toyed
With thoughts of Mars or Moon or Neptune,
But slips away from Solar circles altogether.
What are his ideas? To make his landfall,
Drifting, so he hopes, into a simple orbit
Round some barefaced world that seems to fit
His concept of a desert, and from this place to call
The earth that never even wondered whether
He might make the trip. Thought him mad too soon.

He is surprised, a little, to be alive,
And apart from minor bruises to his knee,
Completely healthy. His sanity we will not
Question here, all men want to be free.

Long before he tires of his navigation
He comes across the planet of his dreams.
Bare, sand duned, and quite rocky.
Swept by dust storms, practically hell,
And this he chooses, chooses well,
To be his exile. My, the man's " cocky."
Basing his landing on his telephoto beams
Of definite, but hardly friendly, information.

The landing made, the first one of its kind,
We must admit the man to be a genius.
His knowledge was all theory from his books,
And yet he flew his ship. Oh, man ingenious.
How did he do it? We shall never know.
And now, descending, with a natural pride
Surveys the world he chose to be his own,
From which he will transmit straight back
The information that the others lack.
He sees from near the desolation round;
The dunes across which sullen devils ride
Their duststorms—like some awful snow.

As if he worried. Entering the ship
He lovingly sets up his main transmitter;
One most expensive, highly powered set
That sits like some great God amid the litter
Of its packing. Gleaming. Batteries connect
And meters flicker. The set becomes alive
To the command of our explorer into space.
He starts his broadcast to the far-off earth,
Tempering his words with well-selected mirth,
So that the men below shall feel no disgrace
For having laughed at one man's sole drive
To win the Universe. He stands erect.

And little creatures with a dozen eyes,
The only denizens of a dying sphere,
Look at him curiously. They do not understand;
Having been overcivilised themselves. They show no fear.
Day after day, for several months he speaks
At regular hours to the people far away,
Knowing that any scientist who hears his words
Will lose no time in following his works along,

Building a ship himself, to right the wrong
That man did to our traveller, that in their herds
Man should flock unhindered into space to play.
Someone will be along within a few short weeks.

Now the batteries have run out,
And while he waits to be retrieved
He has his time to think and write,
And to decide how very much relieved
He will be when he leaves the place
He chose to exile himself into. Unawares
That solar flares had caused disruption
Of radio communication back at home
And sitting in his neatly rounded dome
Dreaming of the positive eruption
His trip has caused among the "squares"
Of science. And the glory to the Human race.

The months pass by. He grows disquiet.
The beam was strong, so that despite
Any possible loss of information on position
He could be traced. If only he were right.
Loneliness approaches. As the little beings
Who are the remnant of an ancient life
Crowd to the dome, the traveller is quite glad
Of their presence, but they can't understand
This building in the shifting, dusty, sand,
And even less the creature who sits alone and sad
Over his desk, his food. They have no feelings.

Years pass away. The traveller, white haired
And hardly sane, is slowly starving now.
All hope is gone, he will not be found,
And realisation of this sprawls across his brow.
With faltering steps he makes his way.
Towards the lock that separates the dome
From the great ship. When he returns
He drags on wearied legs a cable,
With a button which he places on the table.
Pressing it, he blows to nothing his concern
And all within. The creatures scuttle home.
While back on Earth is just another day.

— Alan Lindsey

If you remember the taut suspensefulness of Merritt's "Burn, Witch, Burn" (originally published in 1932 *but still read as a classic of its kind and constantly being reprinted) you will find much in common with it in this short Ballard story of a manipulator of human destinies.*

The Last World Of Mr. Goddard

By J. G. Ballard

For no apparent reason, the thunder particularly irritated Mr. Goddard. All day, as he moved about his duties as ground floor supervisor, he listened to it booming and rolling in the distance, almost lost amid the noise and traffic of the department store. Twice, on some pretext, he took the lift up to the roof-top cafeteria and carefully scanned the sky, searching the horizons for any sign of storm-cloud or turbulence. As usual, however, the sky was a bland, impassive blue, mottled by a few clumps of leisurely cumulus.

This was what worried Mr. Goddard. Leaning on the cafeteria railing he could hear the thunder distinctly, cleaving the air only a thousand feet above his head, the huge claps lumbering past like the colliding wing streams of enormous birds. Intermittently the sounds would stop, to re-start a few minutes later.

Mr. Goddard was not the only one to notice them—the people at the tables on the terrace were craning up at the sourceless din, as perplexed as himself. Normally Mr. Goddard would have exchanged some pleasantry with them —his elderly grey-haired figure in its old-world herringbone suit had been a byword for kindly concern for over twenty years—but today he hurried past without even looking at them. Down on the ground floor he felt less uneasy, but throughout the afternoon, while he roved among the busy counters, patting the children on the head, he listened to the thunder sounding faintly in the distance, inexplicable and strangely threatening.

At six o'clock he took up his position in the time-keeper's booth, waited impatiently until the final time card had been stamped and the last of the staff had left for home, then handed over to the night watchman. As he made his way out, pulling on his ancient overcoat and deerstalker, the clear evening air was still stirred by occasional rumblings.

Mr. Goddard's house was less than half a mile away, a small two-storey villa surrounded by tall hedges. Superficially dilapidated though still sound, at first glance it was indistinguishable from any other bachelor residence, although anyone entering the short drive would have noticed one unusual feature—all the windows, both upstairs and down, were securely shuttered. Indeed, they had remained shuttered for so long that the ivy growing across the front of the house had matted itself through the wooden slats, here and there pulling apart the rotting wood.

Closer inspection at these points would have revealed behind the dusty panes the interlocking diagonals of steel grilles.

Collecting a bottle of milk off the doorstep, Mr. Goddard let himself into the kitchen. This was furnished with an armchair and a small couch, and served him as his living room. He busied himself preparing an evening meal. Half way through a neighbouring cat, a regular visitor, scratched at the door and was allowed in. They sat at the table together, the cat on its customary cushion up on one of the chairs, watching Mr. Goddard with its small hard eyes.

Shortly before eight o'clock Mr. Goddard began his invariable evening routine. Opening the kitchen door, he glanced

up and down the side entrance, then locked it behind him, securing both windows and door with a heavy drop bar. He next entered the hall, ushering the cat before him, and began his inspection of the house.

This was done with great care, using the cat as his sixth sense. Mr. Goddard watched it carefully, noting its reactions as it wandered softly through the deserted rooms, singing remotely to itself.

The house was completely empty. Upstairs the floorboards were bare, the windows without curtains, lamp bulbs shadeless. Dust gathered in the corners and stained the fraying Victorian wall paper. All the fireplaces had been bricked up, and the bare stonework above the mantels showed that the chimneys had been solidly filled in.

Once or twice Mr. Goddard tested the grilles, which effectively turned the rooms into a succession of steel cages. Satisfied, he made his way downstairs and went into the front room, noted that nothing was amiss. He steered the cat into the kitchen, poured it a bowl of milk as a reward and slipped back into the hallway, latching the door behind him.

One room he had still not entered—the rear lounge. Taking a key from his pocket, Mr. Goddard turned the lock and let himself through.

Like the other rooms, this was bare and unfurnished, except for a wooden chair and a large black safe that stood with its back to one wall. The other distinctive feature was a single light bulb of considerable power suspended on an intricate pulley system from the centre of the ceiling.

Buttoning his jacket, Mr. Goddard went over to the safe. Massive and ancient, it was approximately three feet wide and deep. Once it had been painted a dark bottle green, but by now most of the paint had peeled, revealing a dull black steel. A huge door, the full width and depth of the safe, was recessed into its face.

Beside the safe was the chair, a celluloid visor slung over its back. Mr. Goddard pulled this on, giving himself the look of a refined elderly counterfeiter about to settle down to a hard evening's work. From his key chain he selected a small silver key, and fitted it into the lock. Turning the handle full circle, he drew the caissons back into the door, then pulled steadily with both hands and swung it open.

The safe was without shelves, a single continuous vault. Occupying the entire cavity, separated from the three-inch

thick walls by a narrow interval, was a large black tin document box.

Pausing to regain his breath, Mr. Goddard heard a dull rumble of thunder sound through the darkness beyond the shuttered windows. Frowning involuntarily, he suddenly noticed a feathery thudding noise coming from inside the safe. He bent down and was just in time to see a large white moth emerge from the space above the document box, ricocheting erratically off the roof, at each impact sending a dull echo reverberating through the tin walls.

Mr. Goddard smiled broadly to himself, as if divining something that had puzzled him all day. Leaning on the safe, he watched the moth circle the light, frantically shaking to pieces its damaged wings. Finally it plunged into one of the walls and fell stunned to the floor. Mr. Goddard went over and swept it through the door with his foot, then returned to the safe. Reaching inside, with great care he lifted the document box out by the handles fastened to the centre of the lid.

The box was heavy. It required all Mr. Goddard's efforts to steer it out without banging it against the safe, but with long practice he withdrew it in a single motion. He placed it gently on the floor, pulled up the chair and lowered the light until it was a few inches above his head. Releasing a catch below the lid, he tilted it back on its hinges.

Below him, brightly reflected in the light, was what appeared to be an elaborate doll's house. In fact, however, it was a whole complex of miniature buildings, perfectly constructed models with carefully detailed roof-tops and cornices, walls and brickwork so exactly duplicating the original that but for the penumbral figure of Mr. Goddard looming out of the darkness they might have passed for real buildings and houses. The doors and windows were exquisitely worked, fitted with minute lattices and panes, each the size of a soap flake. The paving stones, the street furniture, the camber of the roadways, were perfect scale reductions.

The tallest building in the box was about fourteen inches high, containing six storeys. It stood at one corner of a crossroads that traversed the centre of the box, and was obviously a replica of the department store at which Mr. Goddard worked. Its interior had been furnished and decorated with as much care as its external facade ; through the

windows could be seen the successive floors laid out with their miniature merchandise, rolls of carpet on the first, lingerie and womens' fashions on the second, furniture on the third. The roof-top cafeteria had been equipped with small metal chairs and tables, set with plates and cutlery, bowls of tiny flowers.

On the corners to the left and right of the store were the bank and supermarket, with the town hall diagonally opposite. Again, these were perfect replicas of their originals : in the drawers behind the counters in the bank were bundles of minuscule banknotes, a glitter of coins like heaps of silver dust. The interior of the supermarket was an exercise in a thousand virtuosities. The stalls were stacked with pyramids of tins and coloured packets almost too small for the eye to distinguish.

Beyond the buildings dominating the crossroads were the lesser shops and premises lining the side-streets—the drapers, a public house, shoeshops and tobacconists. Looking around, the entire town seemed to stretch away into the distance. The walls of the box had been painted so skillfully, with such clever control of perspective, that it was almost impossible to tell where the models ended and the walls intervened. The microcosmic world was so perfect in its own right, the illusion of reality so absolute that it appeared to be the town itself, its very dimensions those of reality.

Suddenly, through the warm early morning sunlight, a shadow moved. The glass door of one of the shoeshops opened, a figure stepped out for a moment onto the pavement, glanced up and down the still deserted street, then retreated into the dark recesses of the shop's interior. A middle-aged man in a grey suit and white collar, it was presumably the manager opening the shop in the morning. In agreement with this, a second doorway opened further down the street, this time a woman came out of a hairdressers, began to wind down the blind. She wore a black skirt and pink plastic smock. As she went back into the salon she waved to someone walking down the street towards the town hall.

More figures emerged from the doorways, strolled along the pavements talking to each other, starting the day's business. Soon the streets were full, the offices over the shops came to life, typists moving in among the desks and filing cabinets, signs were put up or taken down, calendars moved on. The

first customers arrived at the department store and supermarket, ambled past the fresh counter displays. At the town hall clerks sat at their ledgers, in their private offices behind the oak panelling the senior officials had their first cups of tea. Like a well-ordered hive, the town came to life.

High above it all, his gigantic face hidden in the shadows, Mr. Goddard quietly watched his lilliputian scene like a discreet aged Gulliver. He sat forward, the green shade shielding his eyes, hands clasped lightly in his lap. Occasionally he would lean over a few inches to catch a closer glimpse of the figures below him, or tilt his head to see into one of the shops or offices. His face showed no emotion, he seemed content to be simply a spectator. Two feet away the hundreds of tiny figures moved about their lives, and a low murmur of street noises crept out into the room.

The tallest of the figures were no more than an inch and a half in height, yet their perfectly formed faces were completely furnished with character and expression. Most of them Mr. Goddard knew by sight, many by name. He saw Mrs. Hamilton, the lingerie buyer, late for work, hurrying down the alleyway to the staff entrance. Through a window he could see into the managing director's office, where Mr. Sellings was delivering his usual weekly pep-talk to a trio of department heads. In the streets outside were scores of regular customers Mr. Goddard had known intimately for years, buying their groceries, posting their letters, exchanging gossip.

As the scene below him unfolded leisurely Mr. Goddard gradually edged nearer the box, taking a particular interest in two or three of the score of separate tableaux. An interesting feature of his vantage point was that by some freak of architecture or perspective it afforded him a multiplicity of perfect angles by which to observe almost every one of the diminutive figures. The high windows of the bank provided him with a view of each of the clerks at their counters ; a transom beyond exposed the strongroom, the rows of deposit boxes on their shelves behind the grille, one of the junior cashiers amusing himself by reading the labels. The department store, with its wide floors, he could cover merely by inclining his head. The smaller shops along the streets were just as exposed. Rarely more than two rooms deep, their rear windows and fanlights provided him all the access he

needed. Nothing escaped Mr. Goddard's scrutiny. In the back alleys he could see the stacked bicycles, the charwomens' mops in their buckets by the basement doors, the dustbins half-filled with refuse.

The first scene to attract Mr. Goddard's attention was one involving the stockroom supervisor at the store, Mr. Durrant. Casting his eye at random through the bank, Mr. Goddard noticed him in the manager's office, leaning across the latter's desk and explaining something earnestly. Usually Durrant would have been a member of the group being harrangued by Mr. Sellings, and only urgent business could have taken him to the bank. The manager, however, appeared to be doing what he could to get rid of Durrant, avoiding his face and fiddling with some papers. Suddenly Durrant lost his temper. Tie askew, he began to shout angrily. The manager accepted this silently, shaking his head slowly with a bleak smile. Finally Durrant strode to the door, hesitated with a look of bitter reproach, and stalked out.

Leaving the bank, and apparently oblivious of his duties at the store, he walked briskly down the high street. Stopping at the hairdressers, he went in and made his way through to a private booth at the back where a large man in a check suit, still wearing a green trilby, was being shaved. Mr. Goddard watched their conversation through a skylight above them. The man in the chair, the local bookmaker, lay back silently behind his lather until Durrant finished talking, then with a casual flip of one hand waved him to a seat.

Putting two and two together, Mr. Goddard waited with interest for their conversation to be resumed. What he had just seen confirmed suspicions recently prompted by Durrant's distracted manner.

However, just as the bookmaker pulled off the towel and stood up, something more important caught Mr. Goddard's eye.

Directly behind the department store was a small cul de sac sealed off from the alleyway leading in from the street by high wooden doors. It was piled with old packing cases and miscellaneous refuse, and its far side was formed by the rear wall of the box, a sheer cliff that rose straight up into the distant glare above. The glazed windows of a service lift

shaft overlooked the yard, topped on the fifth floor by a small balcony.

It was this balcony that had attracted Mr. Goddard's attention. Two men were crouched on it, manipulating a long wooden contraption that Mr. Goddard identified as a telescopic ladder. Together they hoisted it into the air, and by pulling on a system of ropes extended it against the wall to a point about fifteen feet above their heads. Satisfied, they lashed the lower end securely to the balcony railings, then one of them mounted the ladder and climbed up to its topmost rung, arms outstretched across the wall, high over the yard below.

They were trying to escape from the box ! Mr. Goddard hunched forward, watching them with astonishment. The top of the ladder was still seven or eight inches from the overhanging rim of the box, thirty or forty feet away to the men on the balcony, but their industry was impressive. He watched them motionlessly while they tightened the guyropes.

Dimly, in the distance, midnight chimed. Mr. Goddard looked at his watch, then without a further glance into the box pushed the lamp towards the ceiling and lowered the lid. He stood up and carried the box carefully to the safe, stowed it away and sealed the door. Switching off the light, he let himself noiselessly out of the room.

The next day at the store Mr. Goddard made his usual rounds, dispensing his invariable prescription of friendly chatter and bonhommie to sales assistants and customers alike, making full use of the countless trivial insights he had been provided with the previous evening. All the while he kept a constant lookout for Mr. Durrant ; reluctant to interfere he was nevertheless afraid that without some drastic re-direction of the man's fortunes his entanglement with the bookmaker would soon end in tragedy.

No one in the stock-rooms had seen Durrant all morning, but shortly after 12 o'clock Mr. Goddard spotted him hurrying down the street past the main entrance. Durrant stopped, glanced around indecisively, then began to wander through the showcases as he pondered something.

Mr. Goddard made his way out, casually sidled up to Durrant.

" Fine day, isn't it ?" he remarked. " Everybody's starting to think about their holidays."

Durrant nodded absently, examining a display of alpine equipment in the sportsgoods window. " Are they ? Good."

" You going away, Mr. Durrant ? South of France again, I suppose."

" What ? No, I don't think we will be this year." Durrant began to move off, but Mr. Goddard caught up with him.

" Sorry to hear that, Mr. Durrant. I thought you deserved a good holiday abroad. Nothing the trouble, I hope." He looked searchingly into Durrant's face. " If I can help at all, do let me know. I'd be glad to make you a small loan, an old man like me hasn't much use for it."

Durrant stopped and peered thoughtfully at Mr. Goddard. " That's kind of you, Goddard," he said at last. " Very kind."

Mr. Goddard smiled deprecatingly. " Don't give it a thought. I like to stand by the firm, you know. Forgive me mentioning it, but would fifty be any use to you ?"

Durrant's eyes narrowed slightly. " Yes, it would be a lot of use." He paused, then asked quietly : " Are you doing this off your own bat, or did Sellings put you up to it ?"

" Put me up to it— ?"

Durrant closed the interval between them, in a harder voice rapped out : " You must have been following me around for days. You know just about everything about everybody, don't you, Goddard ? I've a damn good mind to report you."

Mr. Goddard backed away, wondering how to retrieve the situation. Just then he noticed that they were alone at the showcases. The groups of people who usually milled around the windows were pressing into the alleyway beside the store, there was a lot of shouting in the distance.

" What the hell's going on ?" Durrant snapped. He joined the crowd in the alleyway and peered over the heads.

Mr. Goddard hurried back into the store. All the assistants were craning over their shoulders and whispering to each other, some had left the counters and were gathering around the service doors at the rear.

Mr. Goddard pushed his way through. Someone was calling for the police and a woman from the personnel department came down in the freight lift carrying a pair of blankets.

The commissionaire holding the throng back let Mr. Goddard past. In the yard outside was a group of fifteen or twenty people, all looking up at the fifth floor balcony. Tied to the railings was the lower half of a home-made ladder,

jutting up into the air at an angle of 45 degrees. The top section, a limb about twelve feet long, had been lashed to the upper end, but the joint had failed, and the section now hung down vertically, swinging slowly from side to side above the heads of the people in the yard.

With an effort Mr. Goddard controlled his voice. Someone had covered the two bodies with the blankets, and a man kneeling beside them—presumably a doctor—was shaking his head slowly.

" What I can't understand," one of the assistant managers was whispering to the commissionaire, " is where they were trying to climb to. The ladder must have pointed straight up into the air."

The commissionaire nodded. " Mr. Masterman and Mr. Streatfield, too. What would they be building a ladder for, senior men like that ?"

Mr. Goddard followed the line of the ladder up towards the sky. The rear wall of the yard was only seven or eight feet high, beyond it the galvanised iron roof of a bicycle shed and an open car park. The ladder had pointed nowhere, but the compulsion driving the two men had been blind and irresistible.

That evening Mr. Goddard made the rounds of his house more perfunctorily than usual, glanced briefly into the empty rooms, closing the doors before the cat had a chance to do more than test the air. He shut it into the kitchen, then hurried off to unlock the safe.

Carrying the box out into the centre of the floor, he unlatched the lid.

As the town came to life below him he scrutinised it carefully, moving up and down the miniature streets, peering through all the windows in turn, fixing the identity and role of as many as possible of the tiny inhabitants. Like a thousand shuttles weaving an infinitely intricate pattern, they threaded through the shops and offices, in and out of countless doorways, every one of them touching a score of others somewhere among the pavements and arcades, adding another stitch to the tapestry of incident and motive ravelling their lives together. Mr. Goddard traced each thread, trying to detect any shift in direction, any untoward interlocking of behaviour.

The pattern, he realised, was changing. As yet it was undefined, but slight variations were apparent, subtle shifts in the relationships between the people in the box: rival store-keepers seemed to be on intimate terms, strangers had begun to talk to each other, there was a great deal of unnecessary and purposeless activity.

Mr. Goddard searched for a focus, an incident that would unmask the sources of the new pattern. He examined the balcony behind the lift shaft, watching for any further attempts to escape. The ladder had been removed but nothing had been done to replace it. Other potential escape routes—the roof of the cinema, the clock tower of the town hall—revealed no further clues.

One incident alone stood out, puzzling him even more. This was the unique spectacle, in a quiet alcove of the billiards saloon, of Mr. Durrant introducing his bank manager to the bookmaker. The trio were still in earnest conversation when he closed the box reluctantly at two o'clock the next morning.

Over the following days Mr. Goddard watched the crowds passing through the store, waiting to detect, as it were in the macrocosm, some of the tendencies he had observed in the box. His sixty-fifth birthday, soon due to fall, was a handy topic which provided ready conversational access to the senior members of the staff. Curiously, however, the friendly responses he expected were missing; the exchanges were brief, sometimes almost to the point of rudeness. This he put down to the changed atmosphere in the store since the deaths of the two ladder climbers. At the inquest there had been a confused hysterical outburst by one of the saleswomen, and the coroner had cryptically remarked that it appeared that information was being deliberately withheld. A murmur of agreement had spontaneously swept the entire room, but what exactly he meant no one seemed to know.

Another symptom of this uneasiness was the rash of notices that were handed in. Almost a third of the staff were due to leave, most of them for reasons that were patently little more than excuses. When Mr. Goddard probed for the real reasons he discovered that few people were aware of them. The motivation was purely unconscious.

As if to emphasise this intrusion of the irrational, one evening as Mr. Goddard was leaving the store he saw the bank manager standing high above the street on the clock tower of the town hall, gazing up into the sky.

During the next week little occurred within the box to clarify the situation. The shifting and regrouping of relationships continued. He saw the bank manager more and more in the company of the bookmaker, and realised that he had been completely mistaken in assuming that Durrant was under pressure of his gambling debts—in fact, his role seemed to be that of intermediary between the bookmaker and bank manager, who had at last been persuaded to join them in their scheme.

That some sort of conspiracy was afoot he was sure. At first he assumed that a mass break-out from the box was being planned, but nothing confirmed this. Rather he felt that some obscure compulsion, as yet unidentified to itself, was generating within the minds of those in the box, reflected in the bizarre and unpredictable behaviour of their counterparts in the outside world. Unconscious of their own motives and only half-aware of themselves, his fellow employees at the store had begun to resemble the pieces of some enormous puzzle, like disjointed images fixed in the fragments of a shattered mirror. In conclusion he decided on a policy of laisser faire. A few more weeks would certainly reveal the sources of the conspiracy.

Unfortunately, sooner than Mr. Goddard anticipated, events moved forward rapidly to a spectacular crisis.

The day of his sixty-fifth birthday he made his way to the store half an hour later than usual, on arrival was told that Mr. Sellings wished to see him.

Sellings first offered his congratulations, then launched into a recapitulation of Mr. Goddard's years of service to the store, and concluded by wishing him as many years again of contented retirement.

It took Mr. Goddard several moments to grasp the real significance of this. Nothing had ever been said to him about his retirement and he had always assumed that he would stay on until, like many members of the staff, he was well into his seventies.

Collecting himself, he said as much to Sellings. " I haven't exactly been expecting retirement, Mr. Sellings. I think there must have been some mistake."

Sellings stood up, shaking his head with a quick smile. " No mistake at all, Mr. Goddard, I assure you. As a matter of fact the board carefully considered your case yesterday, and

we agreed that you well deserve an uninterrupted rest after all these years."

Mr. Goddard frowned. " But I don't wish to retire, sir. I've made no plans."

" Well, now's the time to start." Sellings was on his way to the door, handshake at the ready. " Comfortable pension, little house of your own, the world's your oyster."

Mr. Goddard sat tight, thinking quickly. " Mr. Sellings, I'm afraid I can't accept the board's decision. I'm sure, for the sake of the business, I should stay on in my present post." The smile had gone from Sellings' face ; he looked impatient and irritable. " If you were to ask the floor managers and assistants, not to speak of the customers, they would all insist that I stay on. They would be very shocked at the suggestion of retirement."

" Would they ?" Sellings asked curtly. " My information is to the contrary. Believe me, your retirement has come at a very lucky time for you, Mr. Goddard. I've had a great number of complaints recently that otherwise I should have been obliged to act upon. Promptly and drastically."

As he left the accounts department for the last time Mr. Goddard numbly repeated these words to himself. He found them almost impossible to believe. And yet Sellings was a responsible man who would never take a single opinion on such an important matter. Somehow, though, he was colossally in error.

Or was he ? As he made his farewell rounds, half-hoping that the news of his sudden retirement would rally support to him, Mr. Goddard realised that Sellings was right. Floor by floor, department by department, counter by counter, he recognised the same inner expression, the same attitude of tacit approval. *They were all glad he was going.* Not one of them showed real regret, a good number slipped away before he could shake hands with them, others merely grunted briefly. Several of the older hands, who had known Mr. Goddard for twenty or thirty years, seemed slightly embarrassed, but none of them offered a word of sympathy.

Finally, when one group in the furniture department deliberately turned their backs to avoid speaking to him, Mr. Goddard cut short his tour. Stunned and humiliated, he collected his few possessions from his locker and made his way out.

It seemed to take him all day to reach his house. Head down, he walked slowly along the quiet side-streets, oblivious of the passers-by, pathetically trying to absorb this blow to all he had assumed about himself for so many years. His interest in other people was sincere and unaffected, he knew without doubt, countless times he had gone out of his way to be of help to others, had put endless thought into arriving at the best solutions to their problems. But with what result? He had aroused only contempt, envy and distrust.

On his doorstep the cat waited patiently. Surprised to see him so early it ran forward, purring and rubbing itself against his legs as he latched the gate. But Mr. Goddard failed to notice it. Fumbling, he unlocked the kitchen door, closed it automatically behind him. Taking off his coat, he made himself some tea, without thinking poured a saucer of milk for the cat. He watched it drink, still trying helplessly to understand the antagonism he had aroused in so many people.

Suddenly he pushed his tea away and went to the door. Without bothering to go upstairs he made his way straight into the lounge. Switching on the light, he stared heavily at the safe. Somewhere here, he knew, was the reason for his dismissal that morning. If only his eyes were sharp enough, he would discover it.

Unlocking the safe, he unclasped the door and pulled it back abruptly, wrenching himself slightly against its great inertia. Impatient to open the box he ignored the twinge in his shoulder, reached down and seized the butterfly handles.

As he swung the box out of the safe he realised that its weight was, momentarily, too much for him. Trying to brace himself, he edged one knee under the box and leaned his elbows on the lid, his shoulder against the safe.

The position was awkward, and he could only support it for a few seconds. Heaving again at the box, in an effort to replace it in the safe, he suddenly began to feel dizzy. A small spiral revolved before his eyes, gradually thickening into a deep black whirlpool that filled his head.

Before he could restrain it, the box tore itself from his hands and plunged to the floor with a violent metallic clatter.

Kneeling beside the safe, Mr. Goddard slumped back limply against the wall, head lolling onto his chest.

The box lay on its side, just within the circle of light. The impact had forced the catches on the lid, and this was now open, a single narrow beam reflected off the under surface into the interior of the box.

For a few minutes the room was quiet, except for the laboured uneven sounds of Mr. Goddard's breathing. Then, almost imperceptibly, something moved in the interval between the lid and the floor. A small figure stepped tentatively out of the shadow, peered around itself in the full glare of the light, and disappeared again. Ten seconds later three more figures emerged, followed by others. In small groups they spread out across the floor, their tiny legs and arms rippling in the light. Behind them a score more appeared, pressing out in a solid stream, pushing past each other to escape from the box. Soon the circle of light was alive with swarms of the tiny figures, flickering like minnows in a flood-lit pool.

In the darkness by the corner, the door creaked sharply. Together, the hundreds of figures froze. Eyes glinting suspiciously, the head of Mr. Goddard's cat swung round into the room. For a moment it paused, assessing the scene before it.

A sharp cry hissed through its teeth. With vicious speed, it bounded forwards.

It was several hours later that Mr. Goddard pulled himself slowly to his feet. Leaning weakly against the safe, he looked down at the upended safe beneath the bright cone of light. Carefully collecting himself, he rubbed his cheekbones and painfully massaged his chest and shoulders. Then he limped across to the box and steered it back onto its base. Gingerly, he lefted the lid and peered inside.

Abruptly he dropped the lid, glanced around the floor, swinging the light so that it swept the far corners. Then he turned and hurried out into the hall, switched on the light and examined the floor carefully, along the skirting boards and behind the grilles.

Over his shoulder he noticed that the kitchen door was open. He crossed to it and stepped in on tiptoe, eyes ranging between the table and chair legs, behind the broom and coal bucket.

" Sinbad !" Mr. Goddard shouted.

Startled, the cat dropped the tiny object between its paws and backed away below the couch.

Mr. Goddard bent down. He stared hard at the object for a few seconds, then stood up and leaned against the cupboard, his eyes closing involuntarily.

The cat pounced, its teeth flicking at its paws. It gulped noisily.

" Sinbad," Mr. Goddard said in a quieter voice. He gazed listlessly at the cat, finally stepped over to the door.

" Come outside," he called to it.

The cat followed him, its tail whipping slowly from side to side. They walked down the pathway to the gate. Mr. Goddard looked at his watch. It was 2.45, early afternoon. The houses around him were silent, the sky a distant, pacific blue. Here and there sunlight was reflected off one of the upstairs bay windows, but the street was motionless, its stillness absolute and unbroken.

Mr. Goddard gestured the cat onto the pavement and closed the gate behind it.

Together they walked out into an empty world.

—J. G. Ballard

Back Issues

For readers and collectors who are missing any of the previous issues we can still supply the following copies but stocks are very limited

Nos. 24 ; 25 ; 26 ; 28 to 42 ;

2/- (35 cents) post free

NOVA PUBLICATIONS LTD

Maclaren House, 131 Great Suffolk Street, London S.E.1

STUDIES IN SCIENCE FICTION

Jules Verne may well be considered the cornerstone of presentday science fiction although many other writers of the genre can rightly lay claim to assisting him. This month's article puts him in perspective both as a writer and an individual.

8. Jules Verne

by Sam Moskowitz

Every field of creative endeavour—whether in the arts and sciences, music, literature, architecture, engineering or business administration, can usually point to a single outstanding person who, in some uniquely individual fashion, made the single most important contribution to the field. In science fiction the man who occupies this exalted position is Jules Verne.

Jules Verne was by no means the earliest of science fiction writers, and it cannot be said that his ideas were particularly original; his literary gifts in any way exceptional. But he was the first author to consciously develop an approach to the genre which turned it into a specialized form of literature, quite distinct from fantasy, the gothic horror tale, the fictional political utopia, or the imaginatively embroidered travel tale.

Verne, with great deliberation, set the formula for science fiction by insisting, as a categorical imperative, that everything must be scientifically plausible. This principle he adhered to with strait-jacket rigidity to the end of his writing career.

Copyright 1957 by Sam Moskowitz

Other writers, many of greater literary stature, had written science fiction before. They had utilized virtually every major idea that was later to appear in Verne's books. But none of them had made the effort to explain each departure from the familiar and the known on a consistently logical basis. They usually asked the reader to accept too much on faith and were impatient to get on with their major purpose, which more often than not was a satire, a political uptopia, a hoax or a preachment rather than a bonafide narrative. If the stories of his predecessors also entertained, it was almost inadvertently, since to write a tale of entertainment was rarely a part of their original plan.

During a period when popular entertainment was far more limited than it is today and life frightfully hard for the masses, the fiction of Jules Verne provided an escape which took his readers far from the uneventfulness of their daily lives—to such unlikely and romantic places as the South Pole; beneath the sea, out into space, into the bowels of the earth or aloft in balloons to stratospheric heights.

These voyages were invariably accomplished with such carefully-detailed adherence to known scientific facts that they never failed to produce a complete, and willing suspension of disbelief. And because their main purpose was to entertain, thrilling situation followed thrilling situation with such absolute persuasiveness that the readers were kept enthralled to the very end.

Previous to adopting the formula which was to bring him such brilliant success, Jules Verne—born February 8, 1828, son of a distinguished lawyer in Nantes, France—had been unable to gain any substantial recognition for his literary gifts. At the age of thirty-five he had succeeded only in putting off for an indefinite period the practice of law, for which he had been trained. He turned instead to the writing of plays—including two libretti for operas—and even collaborated with Alexander Dumas on a humorous comedy in verse. Though a number of his plays were produced, not one of them was looked upon with favour by the dramatic critics of the period.

However, the publication of a short story in 1852, *Master Zacharius,* convinced Verne's father that his son had real literary ability. Verne's father, a devoutly religious Catholic, was especially pleased because the story, which dealt with the changes which nineteenth century science was bringing to the orderly and logical development of man's thinking,

seemed symbolically at least, to lean strongly in the direction of religion. This story has since appeared in America as *The Watches' Soul* in a one-volume collection of short stories entitled, *Dr. Ox's Experiments*. It was later reprinted in the December, 1933 issue of *Amazing Stories*.

There followed prolonged subsidy of his son by the elder Verne, a situation which, paradoxically enough, proved uncomfortable to Jules, since as the years passed, it became increasingly burdensome for him to justify his father's confidence.

The works of Edgar Allan Poe provided Jules Verne with his initial inspiration. Though Poe's fame in the United States was slight at the time, his short stories and poems were widely read and admired in France.

Jules Verne, by his own admission, read Poe avidly and with tremendous admiration. He was profoundly impressed by the precise, scientific details which Poe introduced into even his horror tales.

Poe's plots, characters, and settings seemed to him not only startlingly original, but genius-inspired. He never tired of re-reading the tales of a scientific nature. *Mss. Found in a Bottle, The Unparalleled Adventures of One Hans Pfaall, A Descent Into the Maelstrom, The Gold Bug, A Tale of Ragged Mountain, The Balloon Hoax, Mesmeric Revelation, The Thousand-and-Second Tale of Scheherazade, Mellonta Tauta* and *The Narrative of Arthur Gordon Pym.*

Yet his decision to adopt the methods of Poe resulted in a great inner struggle for Verne, for his early religious training made him see a conflict where none perhaps existed and to look upon the approach of Poe as too materialistic. In an essay on Poe, written shortly after the publication of his first successful science fiction story, *Five Weeks In A Balloon,* Verne noted: ' . . . in spite of their other-worldly and superhuman beauty *The Tales of the Grotesque* remain materialistic in their conclusions. One is never aware of the intervention of Providence. Poe even seems unwilling to admit of its existence, and claims to explain everything by physical laws which, at a pinch, he is even ready to invent. One fails to detect in him an atom of that faith with which his unceasing contemplation of the supernatural should have endowed him.'

Before the essay was ended, Verne had obviously contradicted his earlier criticism and mentally resolved the emo-

tional conflict for he utilized Poe's *Balloon Hoax* as the model for his own remarkable and completely scientific story, *Five Weeks In A Balloon*—which first appeared in 1863. Thirty-four years later he was still so much a disciple that he wrote a sequel to Poe's *The Narrative of Arthur Gordon Pym—Sphinx of the Ice Fields* which was published in 1897.

Though in mood and style, there was no great similarity between Verne and Poe, in their approach to the mysterious and the unknown they were very close indeed.

The influence of Poe is seen frequently throughout the whole range of Verne's works. His *Mathias Sandorf* contains episodes of hynotism deeply suggestive of Poe's *The Facts In the Case of M. Valdemar.* Verne's *From The Earth To The Moon* parallels to a considerable degree Poe's *The Unparalleled Adventure of One Hans Pfaall.*

The maelstrom into which Captain Nemo's submarine, "The Nautilus," is drawn in *Twenty Thousand Leagues Beneath the Sea,* can be pinpointed to Poe's *A Descent Into The Maelstrom.* The idea of losing a day in the transit of the world, a pivotal plot device in *Round the World in Eighty Days,* is drawn from a story of Poe's in which a suitor is given the task of producing three Sundays in one week in order to win the hand of the girl he loves. He accomplishes this seemingly impossible task by having two travellers arrive on a Sunday, one from the east, for whom Sunday was yesterday, and the other from the west for whom Sunday will be tomorrow.

Verne, an unsuccessful playwright, seldom praised in reviews, metamorphosed overnight into one of the world's brightest literary stars. This triumph he achieved simply by hitting upon the idea of stressing speculative scientific adventure in full-length novels which placed the strongest possible emphasis upon credibility.

The fact that Verne consciously set up and followed a pattern of writing calculated to win him the greatest possible popularity is nowhere better illustrated than in a letter to a friend at the Paris Stock Exchange, shortly after he completed *Five Weeks In a Balloon.*

"I have just written a novel in a new form," he wrote. "One that is entirely my own. If it succeeds I will have stumbled upon a gold mine. In that case I shall go on writing and writing without pause . . . "

Though a novel about a thousand-mile balloon voyage may not seem very startling today, in 1863 the mere description of such a voyage took readers as far ahead of the accomplishments of the times, as a story about a V-2 converted into an interplanetary space ship would do in 1958.

If there was the slightest doubt concerning the imaginative uniqueness of Jules Verne, it was dispelled by his second novel, *A Journey To The Centre of The Earth,* which appeared in 1864. There has probably never been a finer novel of subterranean exploration. Verne did not originate the idea of another world at the centre of the Earth. Lewis Holberg, writing three-quarters of a century earlier, conceived a land at the Earth's core. His novel was called, *World Underground,* and rare copies occasionally crop up today. Holberg was strongly influenced by Jonathan Swift and cynically chronicled an underground land where females held the whip hand and males did all of the menial work.

Apparently, however, good adventure has proved more popular than social significance, since Verne's novel is still in print, and has been made into a motion picture, while Holberg's interesting little book remains a relatively rare collector's item.

With the publication of *A Journey To The Centre of the Earth* Verne did not rest on his laurels. He followed the novel up with one even more imaginative, that prototype of the modern best seller, *From the Earth to the Moon.* Published in 1865, this novel received an overwhelmingly enthusiastic reception from the French public.

Today, a new 45,000-word novel devoted entirely to the construction of a gun which could fire a projectile around the moon would be greeted by a tremendous yawn on the part of the reading public, particularly if there was no strong human interest factor motivating the characters. However, the French of 1865 not only ate it up—they patiently waited another five years for the book publication of the sequel, *Tour Around the Moon,* which described the adventures of the space pioneers as they completely encircled the moon and fell back to Earth, with a great deal of exciting detail.

There can be no doubt at all that Verne would have liked to include an actual landing on the moon. But the method he selected for the firing of a projectile into space—a giant cannon—left no logical means of returning his characters to Earth.

Despite the mountain of mathematical data which Verne assembled to support his cannon hypothesis, we know today that the muzzle velocity of a cannon-prejected shell designed to overcome Earth's gravitational pull would produce an acceleration so great that any passengers carried in the projectile would quickly cease to draw breath.

Despite this flaw, among others, the book continues to prove of historical interest today, and Verne's description of a Space Train, in which a group of space projectiles are linked together like sausages on a string, still intrigues those who read the book.

Additional proof that it was Verne's method of presenting his material that brought him such astounding popular success can be obtained by considering Crysostom Trueman's book, *A Voyage to the Moon,* published in England one year earlier than Verne's novel. Trueman's narrative is today a literary curiosity, despite the fact it contained some unusual ideas on the construction of a space ship, including a mineral-repellant anti-gravity device, wood for material caulked with tar and airproofed with sheet metal. It even described a live garden of flowers and vegetation to replenish the oxygen for the voyagers. The predominant reason for the book's obscurity lies in the fact that Trueman is primarily concerned with his peculiar Utopian theories, whereas Verne is primarily concerned with narrative suspense and a sense of wonder.

Probably Jules Verne's finest all-around book, considered from all standpoints—careful plotting, above average writing, outstanding characterization, and scientific ideas with a resplendent sweep—ideas which completely outdistance the commonplace—was *Twenty Thousand Leagues Under the Sea,* published the same year as *Tour of the Moon.* Verne has been accused by some critics of weak characterization, but the delineation of Captain Nemo, builder and commander of the marvellous submarine "Nautilus," is an outstanding literary achievement.

On other occasions Verne has created characters quite unforgettably three-dimensional, notably Phileas Fogg in *Round the World in Eighty Days,* and the title character of *Michael Strogoff.*

Is it not possible that poor human characteriation is a limitation basically inherent in science fiction? Might not the

unusual phenomena and special affects which play so important a role in such stories substantially diminish its importance? Outstanding human characterization is so rare in science fiction as to scarcely constitute a worthwhile field of exploration. Critics may be attributing literary shortcomings and limitations to Verne which he did not truly possess, and which is really the fault of the medium itself.

After all, in Verne's *From the Earth to the Moon,* aren't the space gun and the projectile actually the lead characters in the story? Certainly Verne exhausted every effort to depict a space gun effectively. In *A Journey to the Centre of the Earth,* the strange land near the core of the earth is the focal point of the book's interest and not the characters. It is a case of the author and the readers being more interested in *what* happens than to *whom* it happens.

Similarly, the love story motif is almost entirely absent from Verne's scientific romances. Until recently this was true of ninety per cent of all science fiction. Readers were more interested in the theme than in the love life of the characters.

That Verne was able to create as three-dimensional a character as Captain Nemo against the tremendous competition of the marvelous submarine ' Nautilus,' which fights Captain Nemo page after page for reader attention, is the true wonder of *Twenty Thousand Leagues Beneath the Sea.*

Verne's success as a novelist, paradoxically, brought him the fame in the theatre which had eluded him as a playwright. Many of his novels were adapted to the stage, and turned into theatrical extravaganzas which made his name an international household word. One only has to recall *Around the World in Eighty Days,* and its current box office success, to realize how his world-popularity has grown.

Though *Hector Servadac* is one of Verne's most imaginative efforts—he has a group of characters tour the solar system as far into space as Saturn, riding on a comet—it is also one of his weakest stories of prophetic events to come. In previous novels, Verne had gone to fantastic lengths to make every future development scientifically plausible, but in *Hector Servadac,* people are snatched off Earth by a Comet and returned to Earth by methods so weak, obscure and absurd as to make sensible presentation a difficult if not impossible task.

With the entire Solar System to explore Verne succeeds in turning out a tale which can only be characterized as dull,

and more than a little ridiculous. Yet *Hector Servadac* was popular when it was published, probably because it went a great deal further in the realm of interplanetary exploration than Verne's moon stories, and helped to satisfy the public's curiosity as to what was " out there."

It can perhaps be taken for granted that every science fiction writer will try his hand at general fiction at some time in his career—if only to prove his ability to turn out a smash hit without the sensational element that science fiction so often seems to thrive on. Noticeably after 1870 and overwhelmingly after 1878, Jules Verne turned his hand to such work. The most successful of these new, novel-length departures was *Around the World in Eighty Days,* which was published in weekly instalments and aroused such world-wide interest that wire services flashed the plot to newspapers long before the slow moving mails of 1873 could bring it to them.

As the book progressed, several major steamship lines promised Verne fabulous sums if he would consent to send Phileas Fogg across the sea on one of their ships in the closing chapters. Verne was said to have refused all such offers. The story was made into a play, which is still produced from time to time. And Mike Todd's motion picture production of this famous novel has become one of the great sensations of the screen.

Other non-science fiction novels also brought Verne critical and popular acclaim, notably *The Great Eastern,* which was an account of his trip to the United States in fictionalized form. And two other books—*Michael Strogoff,* a powerful novel of life in Czarist Russia, and *Mathias Sandorf,* his longest novel and a brilliant, ironic takeoff on " The Count of Monte Cristo "—were well received and also enjoyed phenomenal success when they were turned into plays.

Following his initial success in 1863, Verne religiously produced at least two novels a year. But after 1878 these were often not science at all, or science fiction through the courtesy of a very minor scientific invention or development introduced into the narrative artificially.

The almost clocklike regularity with which each of Verne's novels made its appearance and the relatively few fantastic ones in later years, eventually led readers to question whether Verne was still alive, and was actually the author of the many volumes bearing his name. Some of his admirers even

made special trips to his home in Nantes to reassure themselves on that score.

During Verne's lifetime, many of his scientific prophecies became inventive commonplaces that ceased to astound, and praise for his perspicacity in that respect reached its zenith when Simon Lake, in 1898, builder of the *Argonaut*—the first submarine to successfully navigate the open sea—opened his autobiography with the lines: "Jules Verne was in a sense the director-general of my life."

Not satisfied with having written his version of Dumas' *The Count of Monte Cristo,* in *Mathias Sandorf,* and written a sequel to Poe's *The Narrative of A. Gordon Pym* in *Sphinx of the Icelands,* Jules Verne, in 1900, paid homage to another writer who had influenced him profoundly, J. R. Wyss. He wrote a sequel to *Swiss Family Robinson* entitled *The Second Fatherland.* In a real sense his *Mysterious Island* echoed Daniel Defoe's *Robinson Crusoe.*

Jules Verne retained throughout his life a high regard for the inventive progressiveness of America and many of his stories featured American lead characters or American locales. Just when one might have supposed that the well was running dry and that Verne had abandoned the world of probable invention, he produced a short story, *In the Year 2889.* It was as prophetic as any of his earlier books, with a colourfully detailed description of dozens of advances in the America of the future, such as moving sidewalks and photo-printing. A distinctive feature which made this story unique was the fact its debut was in America in English and appeared in the 1889 issue of *The Forum.* Later it was translated into French, and republished in Europe with numerous revisions and alterations.

Jules Verne's last story—a science fiction story written just before his death in 1905—bore the appropriately prophetic title *The Eternal Adam.* It boldly asserts, with a persuasiveness that seems almost more than fictional, that a great civilisation of marvellous scientific advancement—apparently our present era—had flourished with splendour and then vanished from the Earth. And, amazingly enough, there is in this story a slight uneasiness about the misuse of science that does not seem at all characteristic of Verne. This feeling, coupled with the passing of loved ones and the burden of illness in old age, had given Jules Verne a pessimism he had never expressed in his work until the very end.

In many respects there is a similarity between the literary lives of the two greatest of all science fiction writers. Jules Verne and H. G. Wells. Both became famous in their younger years by writing science fiction. They turned to general fiction in their middle age and finally to science fiction again to express a note of disillusion and near-despair, because their shared dream—that the advance of science would automatically mean the creation of a better world—had dissolved before the wakefulness of reality.

As Verne approached the turn of the century, his style began to date. But his formula and method were still efficacious, not only for him, but for other new writers who were appearing on the horizon.

At first the general run of sophisticated continental writers had viewed Jules Verne as a nineteenth century freak, naively over-productive. But as novel followed novel, and his fame spread around the world, it was soon realised that he had stumbled across a *new literary form* that was not only different, but popular with the masses.

Science fiction novels began to appear with increasing frequency. In England, veritable giants were to rise in the field, men of the calibre of H. G. Wells, A. Conan Doyle and H. Rider Haggard. And while France never again produced a titan of Verne's stature, lesser men found a ready market for science fiction in that country.

Some of the imitators were actually disciples and followers of Verne, like Paschall Grousset who wrote under the pen name of Andre Laurie and collaborated with Verne on a science fiction novel, *The Wreck of the Cynthia.* In *The Conquest of the Moon,* Andre Laurie avoided the problem of building a rocket to the moon by dragging it almost down to the surface of the Earth with magnets, and was thus enabled to supply readers with a great deal of information about its surface, quite outdistancing Verne in that respect. Laurie's novel was a great success, being reprinted abroad, and was followed by several other science fiction books—*New York to Brest in Seven Hours, The Crystal City Under the Sea,* and *The Secret of the Magian.*

An entire series of science fiction novels—at least fourteen in number—were written by Paul D'Ivoi in France at the turn of the century and published as *Voyages Excentriques,* paralleling the term which Verne had used, *Voyages Extra-*

ordinaires. These volumes were enormous in size, weighing just a little under six pounds. They featured four colour paintings printed on the cloth binding, and had sixty or more line and half-tone drawings, most of them strikingly like the illustration of the science fiction artist, Frank R. Paul. One volume, *The Master of the Blue Flag,* contains some excellent illustrations of immense full-wall television screens called *telephotes*.

Another writer, embarking on science fiction in what was apparently a series only a little less ostentatious in appearance than those of D'Ivoi's, was Georges Price, whose novel *The Star of the Pacific,* dealt with a fantastic four-bowed ship, shaped somewhat like a star.

A bullseye in the direction of good solid prophecy was made in 1883 by the Frenchman, Albert Robida, who wrote, illustrated and published a book titled *Twentieth Centure.* In this volume he predicted, with appropriate illustrations, a fantastic number of scientific " miracles " which eventually came to pass, such as television, jet planes, anti-aircraft weapons, armoured cars, gas, germ warfare, submarines, radio, and automats.

In all truth, most of these ideas were not original with Robida, but because of its number of accurate guesses the book is almost as impressive as Hugo Gernsback's fabulous *Ralph 124C41 Plus.*

In America, Frank Tousey, a leading New York publisher, started the Frank Reade Library in September, 1892—a series of " dime novels " dealing with the adventures of a daring young inventor of mechanical robots, electrical flying devices, submarines and other marvels.

These novels so impressed Verne that he sent the author, Luis Senarens, a letter of appreciation, which remained unanswered for many months because the author feared his handwriting would give away the fact that he was only sixteen years old! Senarens eventually got in touch with Verne and a correspondence ensued between the two.

Jules Verne's example shaped the policies and contributed to the success of the world's first science fiction magazine, published in 1926 by Hugo Gernsback.

As a boy, Gernsback had read and been thrilled by Verne's science fiction, and when he began publishing science fiction

material in his numerous magazines — *Modern Electrics, Electrical Experimenter, Science and Invention, Practical Electrics* and *Radio News*—he insisted that the Jules Verne formula of carefully, logically, explaining every scientific departure be followed faithfully.

The stories were often enlivened by humour, since a keen and discriminating sense of humour was one of Gernsback's most positive characteristics as an editor. They carried the bylines of such authors as Jacques Morgan who wrote *The Scientific Adventures of Mr. Fosdick,* Hugo Gernsback himself, with his famous novel, *Ralph 124C41 Plus,* and his quite flippant *New Adventures of Baron Munchausen,* Charles S. Wolfe, C. M. Adams, John Dequer, George F. Stratton and many others. The reception accorded these stories was so encouraging that Gernsback decided to issue a magazine made up entirely of science fiction.

The first issue of *Amazing Stories,* dated April, 1926, left no doubt as to the debt it owed to Jules Verne. The cover, painted by Frank R. Paul, depicted an ice-skating scene from Verne's *Off On a Comet,* as that body approached the orbit of Saturn. The novel itself was serialized, running as a two part story.

In his first editorial, Hugo Gernsback jubilantly announced: "Exclusive arrangements have already been made with the copywright holders of the entire voluminous works of ALL of Jules Verne's immortal stories. Many of these stories are not as yet known to the general American public. For the first time they will be within easy reach of every reader through *Amazing Stories.*"

Though Gernsback did not publish all of Verne's stories, he did use a liberal selection of them, including *A Trip to the Centre of the Earth, The English at the North Pole, Desert of Ice, Dr. Ox's Experiment, A Drama in the Air, The Purchase of the North Pole,* and the two remarkable novels from Verne's later years, *Master of the World* and its sequel, *Robur, the Conqueror.*

These latter two marked a strong resurgence of the imaginative powers of Jules Verne, after a long period during which he had confined himself predominantly to straight adventure, only occasionally relieved by the inclusion of a minor gadget in one of his tales. The Robur stories saw the prediction of a combination submarine, automobile and airplane, motivated by jets as an integral part of the story.

Even after *Amazing Stories* had passed out of Gernsback's hands, it continued to publish a Jules Verne story from time to time under the editorship of T. O'Conner Sloane, including such novels as *Measuring a Meridian* and *Winter Amid the Ice.*

Beginning in its first issue and continuing for many years, *Amazing Stories* carried on its title page a line drawing of Jules Verne's tombstone at Amiens, depicting Verne raising the lid of his tombstone as a symbol of his immortality. And in connection with the reprinting of *Measuring a Meridian,* T. O'Connor Sloane had Leo Morey do a painting portraying the actual tombstone, which appeared on the cover of the May, 1934, issue of *Amazing Stories.*

While in principle, Gernsback used Jules Verne's best science fiction stories as models for his authors to emulate, in practice he was astute in seeking outstanding stories which did not entirely conform to the Verne formula. He strove, in fact, to obtain stories that combined the scientific integrity of Jules Verne with the very human understanding of H. G. Wells.

In his desire to set a distinct pattern for science fiction, Gernsback was paralleled by a number of the German novelists of the day such as Otfrid von Hanstein, Otto Willi Gail, Bruno H. Brugel and Ludwig Anton, whose works he reprinted in his magazine, *Science Wonder Stories, Science Wonder Quarterly,* and *Wonder Stories.*

For ten years, Jules Verne, through Gernsback, remained a major influence in the science fiction magazine field. Gernsback battled constantly to re-establish certain, unwisely abandoned rules for the writing of science fiction. Just as Verne had achieved success with his formula, where other competent writers had failed, Gernsback found a strong reception for a similar formula, brought up to date—a formula in complete harmony with the latest scientific developments.

In this respect, the dramatic figure of Jules Verne raising his tombstone and reaching aloft, was more than symbolic. It was prophetic, since in every sense of the word the original trail he pioneered with his remarkable tales, continues to be followed, as he figuratively still reaches from the grave and guides the minds of today's editors and writers.

—Sam Moskowitz

Family likenesses, often remotely connected by blood ties, are fascinating thoughts for speculation. Now, just suppose that such ancestral connections could predict one's probable death . . . Coincidence, or something else ?

EXPECTATION

BY RICHARD GRAHAM

I had asked them round for a drink and I hoped to prove my theory to them afterwards.

They came, one by one, via the transport tunnels, and round about the twentieth hour I went down to the lower level to meet them as they arrived. The Parson was the first.

I helped him out of the single-person car, shut its little door, and pressed the button which would take it back to the main tunnel and along to the nearest storage pool. The Parson was shaking my hand warmly.

" How nice to see you again, doctor. It must be six months since we met last ; yes indeed, six months."

I freed my hand. " I'm glad you could come, reverend," I said. " How are things Above ?" I guessed that he had been up recently.

" Much the same, I'm afraid, much the same. The truth of it is we're short of men, and in our present numbers we can't hope to make much impression. But I must say that even so we have one or two mutant churches which are looking quite promising, quite promising."

" That, at least, is something," I said. " Reverend, I thought we would wait for the others here, if that is agreeable to you. My rooms are some distance away on the central level."

" Quite all right," said the Parson cheerfully, and I noted with surprise that he said it only once. He sat down on one of the hard chairs which lined the wall of the transport reception room.

The Scientist was the next to arrive, looking eager, and after him the Bank Manager, looking slightly disapproving. Our party was complete.

I made the necessary introductions, then said : " Gentlemen, I am happy to see from your brief-cases that you have brought the data I asked for. Now my rooms are on the central level, but I think the quickest way to get there is to walk. If you would care to follow me ?"

I led them out of the transport reception room and up a wide concrete staircase. At the top we joined a Great Corridor and rode the moving walkway for about a hundred yards, electric trolleys flying past us all the while.

" Off at the next Small Corridor," I said over my shoulder, and they nodded and followed me as I slid off and started walking up the passage. The second door up was mine. I produced a key and fitted it into the slot and the door slid smoothly back. We went in.

" How wonderful," they said together.

It was a nice room, done in a period style. The carpets were thick, the chairs soft, the lighting gentle. And in a real grate, a real log fire burned and blazed and crackled and sent elusive shadows flickering round the walls.

" I say, how fascinating," said the Scientist, that eager interest in his eye. He went forward to get a closer look, but there was nothing to be seen ; it was a perfectly realistic installation. " How is it done ?" he asked. " I suppose there's no connection with Above ?"

" No, indeed," I replied, " it's entirely self-contained. The draught is artificially generated and the soot and gases are chemically absorbed and disposed of. Expensive, but cosy. Drinks, gentlemen ?"

I closed the outside door and moved over to the bar in the corner, where I produced an assortment of bottles and asked what they would like.

I mixed and poured and the Parson and the Bank Manager joined me at the bar, leaving the Scientist to complete his fruitless examination of the grate. The Bank Manager took in the room with a gesture and made a little joke about my bank account at which nobody laughed but himself. The talk was the idle chatter of acquaintances, rather than the interested gossip of friends.

I refilled their glasses. " Do sit down gentlemen ; I think you'll find the chairs quite comfortable."

They settled themselves deep into the easy chairs round the fire with the air of men unaccustomed to such luxury ; I judged that the time was right for the introduction of my theory.

" Perhaps," I said, " I could sketch the outline of my idea to you while you are finishing your drinks ?"

There were murmurs of assent from the depths of the chairs.

" Theory," I continued slowly, " is too grand a word for it ; I do not pretend that it has any scientific, or even logical, basis. I am not a scientist, I have little scientific knowledge, and I pray that those of you who have will bear with me for the moment, wild and extravagant as the idea must seem to you. To my untutored mind it appears a simple enough proposition, certainly one that should be easy to prove or disprove with your help tonight.

" You must all have experienced, at some time or another, the sort of occasion on which a loving mother extolls the virtues of her son and mentions in passing the amazing similarity between him and his great great uncle. I say this a little facetiously, but I wish you to take the implication seriously ; there often *is* an amazing similarity between relations of two or three generations separation. It occurred to me that perhaps the similarity went deeper than a mere physical likeness ; that there was a basic pattern of existence, a facet of which was revealed in the features of the individual, which could be, as it were, transmitted down the generations, to reappear possibly by chance in a later member of the family. An idea, I say, without logic and without foundation, but an idea which has, strangely, stuck in my mind and demanded verification or refutation. And now I am afraid you will laugh at me for my foolishness !"

" Not at all, it is an intriguing possibility," said the Scientist, sitting a little higher in his chair than the others and looking

a little more awake than they. " I am always ready to admit to the existence of phenomena which may not be explicable in terms of present-day science. But it would be unscientific of me if I were not, at the moment, a little skeptical."

" How wonderfully liberal are the men of science," said the Parson, " how wonderfully liberal ! Yet I too, doctor, am prepared to meet with an open mind anything which you feel you can substantiate. However, I must just mention a less pleasant detail ; we poor churchmen sail near enough to the wind as it is, but I suspect that a belief such as this would definitely be regarded as outside the Orthodoxy. Or do I exaggerate things ?"

" You do not exaggerate, reverend," said the Bank Manager in his thin voice. " I am quite sure that the idea would be held to be Unorthodox."

I had sat up in horror at the mention of the Orthodoxy. " Yes, indeed," I said hastily. " Gentlemen, I trust that none of you will feel it necessary to spread the details of our gathering abroad ?"

They looked at each other a trifle uncertainly for a moment, then they nodded and gave indication of agreement ; there was, after all, no need to mention the meeting to anyone.

I relaxed back into my chair again, feeling relieved ; there would have been no chance of verifying my idea if worries about the Orthodoxy had been allowed to interfere.

The fire had burned low. I leaned forward and threw another log on the grate. Sparks spurted out around it, the blaze jumped up. I leaned back and looking round the circle of the company saw that my action had re-awakened interest in the curiosity ; something near to fascination was briefly reflected in their faces by the leaping transitory shafts of light from the fire.

I continued with my explanation. " What we seek, therefore, as indication of this basic pattern of existence, is a similarity in the lives of relations who have a striking similarity of feature. Of course we cannot expect this similarity to be very profound, since the structure of life itself will have changed with the passing of the generations ; but I think we could expect the salient details of their lives to correspond. For the purposes of this investigation I thought we would restrict ourselves to one of these details ; that which by its nature is

totally unambiguous ; namely, the manner of death and the age at which it occurs. Would you agree that this was the best method of approach ?"

"Certainly," said the Scientist. "It is indeed the only fact we can be sure of possessing in all cases. Our knowledge of our ancestors is limited."

The Bank Manager took off his glasses, twirled them round a few times, opened and shut his mouth, and appeared to be about to speak.

The Parson said : "Sounds simple and valid, quite valid. Even my poor mind can follow it !"

"Perhaps we could consider your data first then, reverend," I said before the Bank Manager could air his views. "If you would be so good as to look through your photographs of relatives of two or three generations removal, and see if you notice any marked likenesses with relatives of your own generation. Then we can investigate their deaths. I must apologise for treating death in so prosaic a manner, reverend."

"A-ha, never mind," said the Parson smilingly, fumbling in his brief-case for the photographs. He produced several boxes. "I'm afraid they're rather a varied lot ; the oldest of them are printed on paper and the rest are film. No opticon in those days ! Do you have a viewer by the way, an old fashioned one ?"

"Yes, of course," I said and produced one from a drawer beside me. "May I suggest that as you look at them you pass them on to us ? It is quite probable that we would spot one with a likeness to yourself which you would miss."

"Right !" said the Parson, and began to sort through his collection of photographs. It was quiet except for the crackling of the fire and the occasional rustling of the photographs. I rose and searched through my desk in the corner until I found another viewer ; then I reseated myself and started to examine the photographs as the Parson handed them on to me.

"Here you are," said I, a moment or two later. I handed the viewer on to the Scientist. "Would you not agree that that looks amazingly like the reverend ?"

The Scientist screwed up his eye. "Remarkable," he said and handed it on to the Bank Manager.

"A definite likeness," said the Bank Manager and handed it on to the Parson.

" I hope it isn't a photo of me that got in by mistake," said the Parson as he extracted it from the viewer and examined the legend on the mounting. " No, we're all right ; it appears to be a great uncle of mine. I'll see what I have on him in my file." He rummaged in his brief-case again. "It would be unfortunate if I turned out to be dead already," he added cheerfully and flourished a piece of paper. " Now, let's see . . . Ah, nothing very conclusive I'm afraid. Apparently great Uncle Augustus died of heart disease at the age of eighty-one."

" I am relieved to hear it," I said. " If I'm right, you have a lengthy span of life in front of you, reverend."

" I'm sure my parishioners will be most disappointed !"

" Ah, you are too modest, reverend," I said a little insincerely. " Now, does that complete our examination of your photographs ?"

" No, I have a few more to look through," said the Parson, and there was silence again as he checked the remaining ones. " Well, I'm sorry to be so useless," he said after a while, " but I can't identify one of my relations in these photographs, not one."

" Never mind," I said, though I was a trifle disappointed.

I picked up the viewer and, handing it across to the Scientist, I asked him whether we could consider his information next. He concurred enthusuastically and sent eager fingers dipping into his brief-case.

Once more we settled back in speculation to consider the photographs of people long dead, and to be reminded that the world in which they had lived has also, alas, long ceased to exist as they had known it ; and to feel a strange element of anachronism and unreality in the smiling faces, the blue skies, the quaint dress ; to identify in ourselves an obscure longing for a way of life we had never known.

Five minutes passed, ten. Then the Scientist gave a mild exclamation. " My sister !" he said. He hurriedly pulled the slide out of the viewer. " My great grandmother," he added.

He explained as he searched through his files. " My sister was killed in a transport tunnel accident about ten years ago. She was twenty-four. This particular great grandmother of mine—" he paused as he read quickly through the details—" died at twenty-five. She was run over by a car." He looked up excitedly.

" A-ha !" said the Parson grandly. " Here is evidence indeed. I sympathise with you, sir, for the untimely loss of your sister, but you have certainly provided the doctor with some very convincing data !"

" It is a considerable coincidence," said the Bank Manager.

" A-ha !" said I, unconsciously imitating the Parson, " but is it a coincidence ? If it is then it must be, as you say, a very considerable one."

" I think we must take it as a strong piece of evidence in favour of the idea," said the Scientist.

" Well, it is something," I agreed. " And now let us finish the examination of your photos."

The Bank Manager was the next to have any success with identification. He had been looking through a group of old, paper-printed photographs and he suddenly alighted on one which bore a marked resemblance to the Scientist himself. The Scientist turned to his files again and produced the details of the particular great great uncle which the photograph pictured : age at death, ninety-five ; cause, old-age.

" Congratulations," I said. " At least we have had no premonitions of early death as yet."

They smiled, a trifle nervously perhaps, and we passed on to the Bank Manager's data. After a few minutes he somewhat reluctantly confessed to a likeness between an uncle and a great grandfather.

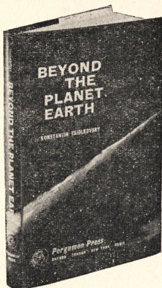
" My uncle died when he was sixty-nine," he said precisely. " He went Above too much if the truth be known ; he loved the open sky and was something of a claustrophobe as well. He caught radiation disease in the end despite the protective clothing." Primly he selected a file. " My great grandfather had a stroke and died at seventy-three. Not very conclusive, I think you'll agree ?"

" Perhaps not," I said, " but I don't think the discrepancy is great enough to count against."

The Parson said : " I agree, doctor, I agree. If anything I think we must regard it as slightly in favour."

The Scientist said : " You know, there's something oddly reasonable about this idea. Looking at it from a purely scientific point of view, of course, one must admit that it has no logical foundation. But, strangely enough, I feel inclined to accept it."

Continued on Page 104



JUST PUBLISHED!

A remarkable work of Science Fiction by the father of Russian Rocketry

TSIOLKOVSKY'S

BEYOND THE PLANET EARTH

This brilliantly conceived and historically interesting fantasy, now translated into English for the first time, contains a strictly scientific account of work in preparation for man's penetration into space and the achievement of interplanetary travel. In a vivid manner the author describes the way in which an international team of scientists, engineers, and inventors tackle the great task.

Beyond the Planet Earth was partially written in 1896, finally published in 1920. This present translation contains an extensive foreword on Tsiolkovsky's life and work.

190 pages. **15s. net.**

Order now from your local bookseller, or in case of difficulty, direct from:

PERGAMON PRESS

Headington Hill Hall, Oxford.

" The universe is too complex to yield up all its secrets to us," I said.

" True, true," they murmured.

We returned to the Bank Manager's photographs and arrived at the end of his collection without further result.

I spread my hands in a gesture of finality. " Well," I said, " there it is gentlemen. I must thank you for spending so much of your valuable time in satisfying my little whim. What we have proved I'm not quite sure ; in fact I'm not even sure that we've proved anything !"

" It has just occurred to me," said the Scientist, " that there is another source of data we could consider ; surely, doctor, you yourself have collections of photographs and ancestral histories ?"

" Yes, certainly," I said. " But I have already checked them for likenesses and I cannot find any."

" Perhaps there was one there of yourself which you missed."

" Perhaps," I agreed. " At any rate you are most welcome to look through them and see if you can find one." I got out of my chair as I spoke and went again to my desk where I located several files and boxes ; I handed the boxes to the Scientist. He accepted them gratefully and started to work diligently through the photographs.

While he was studying them I wandered idly round the room, picking up the empty glasses, making up the fire. I offered them another round of drinks, but they declined it. I stood behind the bar, putting away the bottles and stacking the glasses. Then the Scientist announced he had identified me. I took the photograph and leafed through my files, produced a newspaper cutting. I read it, then sat down abruptly on the edge of a chair.

" Well, gentlemen," I said a little shakily, " it looks as if I am to give my theory the decisive test. My great uncle was murdered when he was forty."

They were silent for a while, all three of them, shock and sympathy showing on their faces.

At last the Parson spoke : " Right at this moment, doctor, we're all hoping very much that your theory is false."

" I never would have thought it," I said, " but I'm beginning to wish it myself."

There was another silence.

" Remember," said the Scientist, " it has no scientific basis."

I said I would remember.

A longer pause.

Then suddenly they realised that it was time they were going, that they should not force the duties of host upon me after I had sustained such a shock. Half-heartedly, I tried to persuade them to stay, but they were determined in their resolve. I accompanied them down to the transport departure room and buzzed for single cars ; soon they were climbing aboard and making ready to set off.

" Goodbye," said the Scientist. " Let us know if anything develops."

" Goodbye," said the Bank Manager.

" Goodbye, goodbye," said the Parson.

" Goodbye," I said, and caught myself before I repeated it. The cars started off, accelerated, and were gone.

Wearily, I returned to my rooms. It had been a strenuous day, and I was tired. I let myself in with my key, closed the door, and went straight across to the bar ; found a bottle and set it on the surface along with a couple of glasses. Then I activated the concealed button with my foot while I poured out a pair of stiff drinks.

The false wall at the end slid back and Randle appeared from amongst his machines and recorders. I handed him one of the drinks, took a gulp from my own, and slumped back into a chair, feeling the welcome warmth of the alcohol gliding through me and life seeping back into my tired limbs. Gradually I began to feel myself again.

" How did it go ?" I asked. " Are the recordings good enough ?"

" Difficult to say without a run-through," said Randle, lazily sitting down in another chair. " My guess is that we've got enough on the Scientist and the Parson for a short period of Compulsory treatment. But I'm not so sure of the Bank Manager ; maybe a spell of Voluntary."

" Yes," I admitted, " the Bank Manager was the tough one ; didn't say much, but once or twice I thought he was going to give me some trouble. The nastiest moment, though, was when the Parson brought up the Orthodoxy ; I was afraid we were in real difficulty then, Fortunately, they decided they were in no danger." I smiled as I thought about it.

" They never suspected that there was an agent for the Orthodoxy in their very midst."

" You were lucky with the Scientist's sister," said Randle.

" They would have believed it anyway," I said, " but that certainly made things easier. As a matter of fact, I wasn't counting on so many relatives being identified ; it could have been awkward if there'd been a couple of bad discrepancies. Still, I might have got round them. I think I made the whole thing pretty convincing."

" Yes ; you did a good job," admitted Randle. " If there were neurotic traits there I'd guess you brought them out. But I was afraid for a moment you were going to overdo the ' complexity of the universe ' line."

" I couldn't resist it," I said. " And they fell for it like the rest of the stuff. ' True, true,' they said." I started to laugh. " The funny thing is the Scientist was the most gullible of the lot. He swallowed everything I told him : ' phenomena inexplicable to present-day science,' he argued. Ha !" I settled back, laughing heartily. Then suddenly I remembered how it had ended and I burst into a fresh roar of mirth. "And the most delightful part of it all," I said when I had my breath back, "is that they think I'm going to be murdered when I'm forty !" I shook with amusement.

Randle smiled sympathetically. " How old are you now ?" he said.

" Thirty-nine," I managed to reply through my laughter.

Randle thought it was funny then ; suddenly he was laughing too.

—Richard Graham

An Appreciation of " Science Fantasy."

As " Science Fantasy " enters its eleventh year of publication, Nova's famed article team of ' Kenneth Johns ' give their opinions of the first ten years of the magazine's history.

THE FIRST DECADE

BY KENNETH JOHNS

Ten years ago in the summer of 1950 a new magazine appeared on the bookstalls of Great Britain. Pocket size, 96 pages, costing 1/6d., it was well and clearly printed on quality paper, details of significance during that period of paper famine. The second issue appeared, dated winter, 1950.

The type of story feature in this brand new magazine was science fiction with a fantasy element. As the editor of the first two issues, Walter Gillings, wrote : ' fantasy or fact ? A bit of both, perhaps. You might call it *science-fantasy*.'

When the third issue dated Winter, 1951, under the editorship of John Carnell appeared, the magazine began to settle down into the long-running success that today brings it to issue No. 43, its tenth year of publication, and the unique position of being the only magazine of its kind in the world.

This third issue brought other changes ; the format lined up with the other Nova Publications magazine, *New Worlds*, the price in face of rising costs was 2/- but the same high quality of production remained. The problems that bedevilled the path of *New Worlds*—through which, happily, that magazine has come successfully to its 100th edition — applied to *Science Fantasy*, and with even more harshness. As the junior

magazine, *Science Fantasy* had to prove there was a market for material of the kind published—or die.

Science Fantasy did this by establishing a personality all its own. The added element of fantasy, carefully handled by editor Carnell, gave a lightness and a freshness, a whole new dimension to the contents that a magazine devoted solely to science fiction must, perforce, lack.

There were fine authors on whom to call. From these early issues, as I leaf through the contents pages, familiar names leap out. Arthur C. Clarke, John Christopher, John Wyndham, William F. Temple, J. T. McIntosh, E. C. Tubb. There was still a heavy percentage of purely s-f stories ; but many of these authors found that their more imaginative stories, that weren't afraid to step on a corn or two of the strictly limited fact-extrapolation school of s-f, gave them immense and surprising pleasure.

The interregnum when Nova changed addresses, printers and format passed, and at last the company settled down to producing a steady flow of monthly *New Worlds* and bi-monthly *Science Fantasy's*. For the third time the magazine appeared in a new format. The title logo was changed fractionally from the early issues ; the word *Science* was now in uncompromising uncluttered lettering ; the word *Fantasy* in a fantastical style that gave at a glance the quality of character of the magazine.

At this time, too, the innovation of the Guest Editoral began to contribute a number of important new articles in the documentation of literary s-f. Of these guest editorials one of the most penetrating was that written by William F. Temple, who denounced in stern terms the insidious growth of ' Standard Style ' in the s-f magazines, prophesying that it would stifle the ' black magic ' that only s-f can bring to the imaginative mind.

Certainly the magazine set out to bring before its readers material with that delicate touch of literary and imaginative magic, that slender but electric spark of wonder, that was rapidly dying out of much magazine science fiction.

The guest editorial died with No. 14 and in No. 15 appeared the only letter column ever in *Science Fantasy* : a ' Dear Editor ' by readers sparked off by John Burke's controversial guest editorial. These guest editorials were amusingly reveal-

ing as a spy-hole on authors' thought processes and contributed much to the growing popularity of the magazine.

With No. 15 a new name appeared. John Brunner. Like Jim McIntosh, most of Brunner's best work appeared between the covers of *Science Fantasy*, and from No. 15 on he has contributed perhaps more individual stories than any other author. And this despite the prolific output of those inimitable yarns from the pen of the erstwhile E. C. Tubb.

But to go back a little. Issue No. 8—for which, incidentally, there was a wait of almost a year—ran " Tomorrow " by Ted Tubb. This was a grim story of an atomigeddon aftermath in typical Tubb style. It aroused considerable comment, both at the time of its appearance and after. Editor Carnell commented ruefully that he was snowed under with grim, tough, realistic yarns a la Tubb's " Tomorrow " for years.

Other names new to the magazine were appearing, names well-known in the science fiction world. Eric Frank Russell, Sydney J. Bounds, Francis G. Rayer, Bertram Chandler and John F. Burke. But one newcomer began to turn out amusing stories featuring Dimple, a rather special Dachsund. John Kippax had arrived in the pages of *Science Fantasy*, and found a niche peculiarly suited to him. W. P. Cockcroft paid a fleeting visit in No. 9 and Peter Hawkins, better known in the pages of *New Worlds*, also contributed from time to time.

Then, a story that had been announced for No. 11, had not appeared and then showed up in No. 12, indicated the diversity of material the editor was able to publish. In " The Wrong Track," Jack Chandler turned out a neat fantasy which had something to do with a place called the Globe, a pub in Hatton Garden, where odd types bearing the names of well-loved authors congregated (and from where, basically, Arthur Clarke later drew the locale for his *Tales from The White Hart* series). After such a beginning, is it any wonder that the fantasy developed faster and richer ? In this issue the guest editorial by Alfred Bester — in London at the time — pointed up differences between American and British science fiction.

Writers like Wilson Tucker, C. M. Kornbluth and James White began to appear. Jack Williamson, Dan Morgan, Peter Phillips—the list was growing.

Despite its bi-monthly schedule, a very positive atmosphere of friendliness was developing around the magazine. And with

the inauguration of the policy of one long novelette or short novel per issue, the chance for really good material increased enormously. The literary quality of *Science Fantasy* has always been high, and here it might not be inappropriate to remark that *Science Fantasy* has an enviable reputation for publishing stories suitable for inclusion in discerning anthologies (at least five of its stories have appeared in Dell's *S-F : Year's Best*). As editor Carnell pointed out in No. 35—the first time an editorial as such had been used since the early days—the literary quality of *Science Fantasy* is higher than that of *New Worlds*.

With issue No. 27 prolific American author Robert Silverberg took the lead novel spot, to be followed in No. 28 by Harry Harrison and Katherine MacLean combining in a rip-roaring fantasy " Web of the Norns." British authors were not being overlooked, however, and No. 29 carried John Brunner's " Earth is But a Star," considered by many to be his finest work. Issue No. 31 saw Ted Sturgeon appearing with the new " The Graveyard Reader." This story, incidentally, copped the cover, and the cover for the novel " The Bones of Shosun " was used on John Kippax's " Destiny Incorporated " an issue earlier.

A word on *Science Fantasy* covers. Any magazine catering for s-f readers must, of necessity, provide covers that are of an s-f nature, and which at the same time are compatible with public taste. This angle to the art of magazine publishing is a little like walking the tightrope. This *Science Fantasy* has conspicuously succeeded in doing.

Numbers 3 and 4 carried covers by Reina Bull, a cover artist whose loss is sadly missed in British science fiction circles. Her work was startlingly reminiscent of that of Mrs. Brundage during the heyday of *Weird Tales*—and yet a gulf leans between the type of material behind those covers.

Gerard Quinn followed with a long series of excellent covers, then No. 22 to No. 25 were taken over by Jose Rubios, the name used on fantasy work by *New Worlds* cover artist Terry. From No. 26 Brian Lewis began his outstanding series of impressionistic covers, running parallel with those he was doing for *New Worlds*. With the interruption of No. 32, Brian continued the impressionistic and surrealistic covers through to No. 36. Number 39 broke the long Lewis run with an intriguing painting by the new team signing themselves ' Jarr.' From No. 33 a contents listing panel appeared on the right

hand side of the cover, which although venturi-before-the-bow as far as normal publications are concerned, seems to have been readily accepted by the readers of *Science Fantasy*. But then, they are on the lookout for the unusual . . .

Outstanding covers over these ten years ?

Those by Reina Bull, of course. The cover of No. 7, which in its sheer evocation of that sense of wonder that has not been lost by this magazine, stands out memorably. This is a Quinn, as are those of No. 8 and No. 16, both, oddly enough, illustrating a Tubb : " Tomorrow " and " The Wager." " The Wager's " cover on No. 16 is striking in its impact—severed heads as trophies mounted neatly on the walls.

Of the Rubios perhaps that for No. 25, " Reason for Living," best represents his work. Then follows the first Lewis impressionist, and perhaps the best. Here, you might feel, seeing the cover on the stands, is a magazine containing concepts beyond the mundane . . . And you'd be right.

The cover of No. 34, a Lewis for John Kippax's outstanding short " The Lady was Jazz " is equally outstanding. The lady smoulders with a dark fire and a brooding power that grow the more you study her. The Lewis cover for No. 41 is a charming city scene that contains the promise of far worlds and outre adventures ; strangely enough it is not credited to any story and one lives in hope that, one day, a story will be written to fit this cover.

Oh—and from a telephone conversation with Brian I understand that the cover of this issue that you hold in your hand is rather good, too . . .

The irrepressible Hek Belov, the world's foremost cyberneticist—it says here—cascaded into the pages of *Science Fantasy* from the mind of Edward Mackin. This series is one of the better things about modern s-f and is one which, we can only fervently pray, will long be with us. Perhaps a large and juicy portion of cherry pie might induce Mr. Mackin . . .?

With No. 34 began another important series, this time articles under the general title of *Studies in Science Fiction*, in which veteran Sam Moskowitz writes entertainingly about the masters of s-f—and I find nothing unusual that most of his subjects are more famous as science fantasy writers than as s-f writers.

This series continues to run and is proving to be a most popular feature of the magazine. And with Sam's meticulous scholarship and the number of available subjects, we can again only hope he carries on for a very long time.

One of the advantages of running a long novel was pointed up by the publication in No. 33 of Richard Wilson's " Super City " which had to be cut up into two for US publication. In No. 35 Arthur Clarke and Jim McIntosh were back, along with Fritz Leiber—which brings us to remark on *Unknown Worlds*.

Unknown, we are continually being told, was the ultimate in fantasy fiction and why, oh why, cannot the magazine be brought out again. The answer, and it is a good answer, is that there is no market. But *Science Fantasy* continues to sell ; continues to go from strength to strength. Yes, well . . . So there must be a market somewhere, an intelligent circle of readers who like to read well-motivated, consistent, logical fantasy, with far-ranging imagination, liberally spiced with straight s-f. These readers are today being looked after by the only one publication we know of in the world.

John Carnell uses little weird material. The magazine, besides straight science fiction of a high calibre, specialises in fantasy and off-trail material, with a modern occult theme from time to time.

This is a specialised publication, selling to special people. There aren't a lot of us. Should horror and disaster befall and *Science Fantasy* cease publication, a very big and aching hole would be created. I feel it is incumbent upon all of us to support the magazine to the best of our abilities ; and if that means going out and seeing if you, personally, can find another kindred spirit, then more strength to your elbow. We can do with more readers. And I am confident that there *are* more potential readers, people who will kick themselves that they have missed so much when they find their first copy of the magazine. Let's hope that this brief resume will tempt them to explore backwards along the files as well as forwards, and that when the twenty-year mark comes around—and the 100th issue—they will be able to read a longer and better resume telling how *Science Fantasy* has maintained and improved its present very high level of quality, of imagination and of sheer entertainment value.

—Kenneth Johns

All-Star 100th Issue

NEW WORLDS SCIENCE FICTION

128 *pages Monthly* 2/6

Specially written stories by :

★ BRIAN W. ALDISS
★ JOHN BRUNNER
★ COLIN KAPP
★ JOHN HYNAM
★ WILLIAM F. TEMPLE
★ E. C. TUBB
★ JAMES WHITE
★ JOHN WYNDHAM

★ Articles ★ Features

★ Cover by LEWIS ★ Illustrations by THOMSON

Don't miss this Great Issue !

ORDER FROM YOUR NEWS DEALER
N O W

NOVA PUBLICATIONS LTD

Maclaren House, 131 Gt. Suffolk Street, London, S.E.1

Make Your Talent PAY

"Britain" a great writer has reminded the nation in a broadcast, "is a country glittering with great chances" for men of energy and courage — men such as those who have trained under I.C.S. direction.

There are unlimited opportunities for men who can undertake responsible well-paid work, men like I.C.S. students. Here are some of the principal I.C.S. Courses. *Let I.C.S. put YOU on the road to success now.*

ADVERTISING
General Advertising
Copywriting
Retail & Department Store
Layout & Typography
Market Research

ART
Oil & Water Colour
Commercial Illustrating
Figure Drawing, Lettering

BUILDING
Architecture
Clerk of Works
Building Construction
Bricklaying, Specifications
Quantity Surveying
Heating & Ventilation
Woodworking

CIVIL ENGINEERING
Highway Engineering
Structural Engineering
Concrete Engineering

COMMERCE
Book-Keeping, Accountancy
Office Training Costing
Secretaryship
Shorthand & Typewriting
Computor Programming
Storekeeping

DRAUGHTMANSHIP
Architectural, Mechanical
Maths. & Machine Drawing
Drawing Cffice Practice
Structural Drawing

ELECTRONICS
Industrial Electronics
Computors & Maintenance

FARMING
Arable & Livestock
Farm Machinery Maintenance
Pig & Poultry Keeping
Market Gardening

FIRE ENGINEERING
I.F.E. Examinations
Fire Service Promotion Examinations

GENERAL EDUCATION
G.C.E. Subjects at Ordinary or Advanced Level
Good English
Foreign Languages

HORTICULTURE
Complete Gardening
Flower & Vegetable Growing
Fruit Growing

MANAGEMENT
Business Management
Hotel Management
Office Management
Industrial Management
Personnel Management
Work Study, Foremanship

MECHANICAL and MOTOR ENGINEERING
Engineering Mathematics
Diesel Engines & Locomotives
Production Engineering
Maintenance Engineering Inspection
Workshop Practice
Welding, Refrigeration
Motor Mechanics
Running & Maintenance
(many other subjects)

PHOTOGRAPHY
Practical Photography

P.D.A. Examination

POLICE
Entrance Examination

RADIO, T.V. and ELECTRICAL
Radio Servicing & Eng.
T.V. Servicing & Eng.
Radio Construction (with kits)
Electricians
Illumination Engineering
Basic Electrical Work

SELLING
Commercial Travellers'
Sales Management
Retail Selling

WRITING FOR PROFIT
Short Story Writing
Free-Lance Journalism

MANY OTHER SUBJECTS INCLUDING
Industrial Instrumentation
Petroleum Production
Textiles, Dressmaking etc.

INTENSIVE COACHING for all principal examinations including C.I.S., A.C.C.A., I.C.W.A., B.I.M., A.M.I.Mech.E., Brit.I.R.E.. I.Q.S., City and Guilds of London Institute, R.H.S., etc.

Short Story Writing — Free-Lance Journalism
improve your natural talents as a writer. Learn style, technique, plot construction and, most important, how to sell your work.

Start today the I.C.S. way!

INTERNATIONAL CORRESPONDENCE SCHOOLS
Dept. 151, Intertext House, Parkgate Rd., London, SW11

Please send free book on...

Name........ .... Age...........

Address...

....

Occupation...9.60

INTERNATIONAL CORRESPONDENCE SCHOOLS