

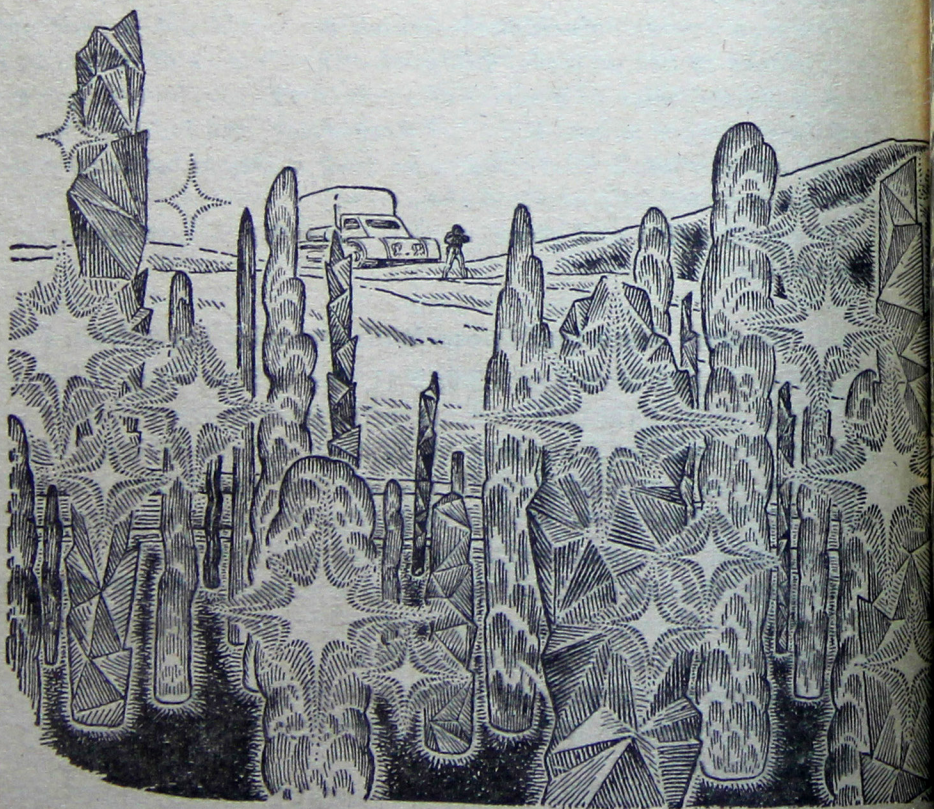
Few science fiction stories manage to combine astonishingly new ideas in other-worldly creatures and an unusual insight into the sociological problems of dealing with them. But Mr. Aldiss puts together a BEM and a conscience in . . .

Tyrants' Territory

By BRIAN W. ALDISS

FROM the heavy and turbulent cloud layers of Askanza VI, rain fell solemnly. It pattered on

the roof of the overlander making its way down into a coastal valley. Craig Hodges, sitting at



Illustrated
by FINLAY



Virgil
Finlay

the wheel, nodded reflectively to himself. If he and his Planetary Ecological Survey Team (PEST for short) passed this world as safe for habitation, future colonists would still have plenty to worry about from the weather alone. Askanza, the sun, never broke through VI's clouds.

Craig smiled. He had little sympathy for colonists at the best of times. All his affections went to these unexplored planets on the fringe of Earth's ever-expanding spatial frontiers. Each of them, however luxuriant, however barren, presented its own special problem and guarded its own special secrets.

Bumping its way down a mile long slope, the overlander came onto a plateau. From here, but for the rain which now gave signs of abating, there should have been a good view ahead. Craig stopped on the edge of the plateau, peering forward. He was reluctant to leave the advantage of high ground without knowing what he was going into, particularly in a coastal region. Coasts were focal areas for life on almost any planet, and a lifetime of PEST service had taught Craig caution.

Craig was not exactly anticipating anything momentous in the way of life on this moonless, tideless, grassless ball; still, any form of anticipation could be misleading on a new world.

The dwindling curtains of rain parted, dimpling away across an expanse of grey water. So Craig got his first glimpse of the sea, and his first surprise.

From the quiet face of the waters rose tall and thin pillar-like structures. Irregularly spaced, they varied in height, and rose from a few yards off shore to about a mile out to sea.

Adjusting his binoculars, Craig studied them with interest. In the glasses, the pillars glinted with a diversity of subdued color. Some were opaque, some semitranslucent. Their surfaces, as far as he could make out, were by no means regular. Some looked sharp-edged and geometrical, some haphazardly ragged, some rounded. Some were as much as fifty feet high.

Pleased speculation filled Craig. Here was something he had not met with before—a man could ask for no more than that. On first sight Askanza VI had threatened to be dull; now he knew it would not be.

THE PEST ship had landed several hours ago on a high tableland beyond the mountains through which Craig Hodges had driven. Craig and his two colleagues, Barney Brangwyn and young Tim Anderson, made their usual preliminary ride-around before splitting up. They had seen little but barren land,

curious rock formations, some stunted trees and a large number of surprisingly symmetrical boulders; Askanza VI was no beauty spot. Then they had separated to take up their customary positions eighty miles apart at the three corners of an equilateral triangle, Tim staying by the ship, Barney and Craig moving off in their overlanders.

Thus did the PEST work. Briefly, their job was a two fold one: to discover if a new planet harbored any species which would unduly menace the farmers and other colonists; and—if such a species existed—to suggest how it might best be dealt with without destroying the ecological balance of the planet. Time had shown that the most economical way of making the necessary observations was to have three trained men sitting eighty miles apart from each other, interpreting what they saw. Old exploratory methods of hacking one's way round a planet until one eventually blundered into trouble had been superceded long ago.

When he had made a careful survey of the pillars, Craig put down his binoculars. He estimated one to every seventy-five square yards of shallow sea, but their irregular placing made it difficult to be accurate.

Now most of the rain had cleared, and for the first time

Craig saw into the valley below him. It was full of moving creatures!

Climbing out of the cab, Craig jumped down and went forward for a closer look. He was now almost the required eighty miles from base, so that this busy valley might well be regarded as his Plot for investigation. Fantastic rocks outcropped from the ground as he descended. As before, there was no plant nor flower anywhere, nor even a blade of grass; although a few mosses grew by the rocks. The heavy clayey ground ran right down to the water's edge.

WHEN Craig found a suitable vantage point down the slope, he stopped to observe, raising the glasses again to his eyes.

From the complex nature of their activity, the creatures might be reckoned to possess intelligence, although it was difficult to decide what they were doing. At the far end of the beach they had raised a high earthwork which looked unmistakeably like a defense. The creatures themselves varied in size but not in shape. Craig mentally labelled them turtles, for it was to that reptile they bore most resemblance with their huge carapaces and flipper-like extremities. From the chunky shell, six limbs and a

head protruded. One pair of limbs were legs and feet, another arms and hands, while the intermediate pair served the intermediate purpose, being used sometimes to handle objects, sometimes to be walked on. Their heads were large and clumsy, with one eye and a beaky mouth. The mouths, as Craig could see, contained big teeth. Since these creatures when erect stood about five feet high in their armor plating, their total appearance was formidable.

Many of these turtle-like beings worked about a structure which was a baffling mixture of rock and metal. Others were parading about the strip of beach. Some dug in the ground, some stood as if in contemplation.

At a sound behind him, Craig turned.

He saw now that the outcropping rocks he had passed had been hollowed out on their seaward side for some depth. Turtles were coming out at him, moving fast, some on two legs, some on four.

Seen this close, they were daunting. For all their speed, they looked enormously heavy. Their flippers, thick and closely scaled, would have been capable of felling a man. They charged at Craig with snapping jaws, a small bony antenna flicking on

their foreheads. Craig did not stop for a second look.

A few of the creatures who came charging out bore cup-like objects in their flippers. As Craig turned, the first cup was thrown at him.

It came hard, flung with force and accuracy.

Craig dodged and it shattered on the ground nearby. He slipped on the clayey slope, and began to run back to the overlander as fast as he could. The turtles were after him. They made no cries, but already other turtles were hurrying up from the valley. They moved fast, jaws snapping.

The overlander was only a few yards away. As Craig reached the door, one of the cups struck him on the shoulder. It broke, splashing liquid over his uniform. He whirled; the turtle who had thrown it was almost on him. Reluctantly, even in the heat of the moment, Craig pulled out his gun and fired. The shot caught the creature full in the breastplate and bowled it over backwards as Craig swung himself up to safety. Gunning the engine, he backed away. Another fiercely flung cup struck the door as he did so.

SWINGING in a wide arc, Craig began to head his vehicle for the slopes. His shoul-

der was burning painfully; he ignored it, so angry was he with himself for his carelessness. He had fallen into the elementary error of anticipating Earth-like behavior from an Earth-like creature. These things which looked like turtles had a ferocity and certainly a turn of speed unknown to the beings they most nearly resembled on Earth.

The overlander reached the foot of the mile long slope and stopped, its wheels slithering in mud brought down by the recent rain. Cursing quietly, Craig switched to caterpillar, shutting down the drive as the retractable tracks came into position. As he opened up again, there was a grinding noise outside while the vehicle lurched forward and then fell back again. Something had jammed the tracks. He was stuck.

Another attempt to move on dual drive failed.

Leaning half out of the cab window, Craig saw that one of the turtles was wedged with its shell broken between the track plates. Its feeble movements awoke compassion in him, even as he cursed it, for he would have to dislodge it before the overlander would move again.

He jumped out hurriedly. This turtle must have hung on and taken an uninvited ride, or it would have been left behind with the others. It was too bad

for all concerned that it had attempted to meddle with the tracks.

Grabbing a crowbar from an external kit locker, Craig levered at the creature's shell. His shoulder was paining him badly. The main body of turtles was now only a hundred yards away, coming up fast. To add to Craig's troubles, night was coming on, Askanza's dull light thickening into dusk. The planet had an eleven and three quarters hour long day, which meant only about six hours of daylight in these latitudes. Not, Craig thought, the happiest of places, even for colonists.

The injured turtle gave a creaking groan as Craig applied pressure. Its shell was formidably tough and would not budge, locked as it was between plates and against a drive wheel. Craig could see he would need a sledge hammer to break it up. He climbed back into the overlander: there was no time now to do more—the other turtles had caught up with him again. A minute later, some fifty of them were grouping round the vehicle. They hammered and slapped against it until the interior echoed with sound. The light was exceedingly bad now; Crain switched on an upper searchlight to see what was happening outside. Certainly the light rattled the turtles. They

hurried out of the beam but did not retreat far. In the reflected light, their eyes glittered emerald green. Their antennae flicked about alertly.

THE overlander was, among other things, a mobile fortress. Craig could have wiped out every creature present by half a dozen means, but killing was not to his taste or his policy. He sat for a moment high up in the cab, watching to see what would happen next.

Obviously the turtles were curious about the vehicle. They were hostile, yes, but something more than mere blind hostility directed their actions. On the edge of the gloom, they waited now with the impatient patience of reasoning beings.

Grunting with the pain of his shoulder, Craig retreated into the small room at the back of the cab. If they disliked light, light they should have. Pressing a wall stud, he sent an arc light rising ten feet above the overlander's roof on a telescopic leg. When he switched on, brilliance poured in through the windows at him.

With a pounding of flippers, the turtles retreated again, some still flinging cups against the vehicle.

"Splendid!", Craig said, and retired to the lab to treat his shoulder.

It was red and blistered, from his collar bone down to his elbow. A simple test satisfied Craig that he had been bombarded with a fairly strong solution of sulphuric acid. He annointed himself, bandaged himself, and went to view his visitors through the overhead blister.

The turtles kept their distance in a ring some forty yards off, milling about impatiently.

"I'm still within acid-cup throwing range," Craig said to himself.

He loaded the flare rifle, setting its timer to fire every fifty seconds and its altitude at two hundred feet. As soon as the first flare burst overhead, he climbed outside with a sledgehammer.

Green light bathed the land as the temporary star burned viridian-fierce overhead. While the turtles fled from the brightest light Askanza VI had ever seen, Craig got to work, hammering at the wedged carapace. He was dragging the last chunk of shell from the track as the third flare went up. By now the unfortunate turtle was dead. Taking up its great head and a chunk of shell and body, Craig climbed back into his vehicle once more, switched off the flare rifle and arc light and started moving.

The overlander responded

without trouble now, dragging itself easily out of the mud and heading up the slope. As it did so, the turtles closed in again and began to follow. Their persistence was impressive.

Ignoring them, Craig climbed the slope. Glancing at his watch, he saw it was time for his group call with Tim and Barney. He had, of course, no intention of returning to the ship. His Plot had its little problems; but it was problems he was here to investigate.

AFTER driving half a mile, he halted and switched on his overhead arc again. In three minutes, the first of the pursuing turtles thudded up, to stand at a respectful distance outside the circle of light.

By now it was almost completely dark, the stuffy unpunctured darkness that had covered the face of Askanza every night since it was created.

Craig went below to the wireless, turned onto Frequency Modulation and called Tim. In a short while, both Tim's and Barney's voices came through, Tim quiet and deferential as usual, Barney full of bounce.

"Nothing very exciting to report here," Tim said. "No life at all visible, except through a microscope. Well, that's not strictly true; I have found a worm fifty millimetres long!

How fortunate that a day so dull should be so brief. I've occupied myself taking soil samples and borings. The crust of the planet is loaded with ore. Its mineral wealth will make Askanza VI an industrial bonanza in a decade, heaven help it. Seems funny to think of the millions of years of peace it's had, and in ten years time it'll be lusty and brawling with materialism. . . . It's been pouring here ever since you two left, a steady acidic shower—I've kept figures, since they vary slightly from hour to hour."

"Just as well the ship and vehicles are fully proofed," Barney grunted.

"Despite that, the soil's okay," Tim went on. "Nature seems to have preferred the inorganic to the organic here, but with implantations of suitable micro-organisms I see no reason why Earth-type crops shouldn't be grown here in a year or two. Rice probably, in this climate!"

"It's dry in this region," Barney said. "I'm sheltered by the mountains, tucked in a valley, and fourteen miles from what the radar shows to be ragged coast. It's been so mild I ate my meal in the open."

"What have you been doing besides eating, Barney?", Craig inquired.

"Since you ask, I've been fiddling with the search radio,

among other chores. As you can hear, our reception at 85 Mc/s is brilliant, but some of the other frequencies are surprisingly congested. There's some curious mush on the short waves—sounds almost like *musique concrete* at times. If nothing better offers itself tomorrow, rather than waste my time here I'll return to you, Tim, and use the ship's radio equipment to chart the various sky layers. If the colonists come here poor guys, they'll need wireless, so a few preliminary findings won't hurt—that is, if it's okay with you, Craig?"

Craig hesitated.

"The sky's not our job, Barney, nor is wireless reception," he said. "If there are no reflecting layers at all topside, the colonists can still use direct wave, as we are doing. Have you found nothing of interest on the ground?"

BACK in his own vehicle, Barney twiddled a curl of his beard round a finger and studiously kept any irritation out of his voice as he replied.

"There are some six-legged things crawling about—look like turtles with large heads," he said. "They seem to move very intermittently, and are sluggish when they do move. Ugly devils, but harmless for all their array of teeth. I'm afraid I just can't

see them in the role of Plimsol Species, Craig. Fodder for Colonists I'd call them, until they all get killed off and eaten."

Craig stared incredulously at his amplifier.

"They . . . drag themselves round on all six legs?", he asked.

"Yes. When I went over to them and kicked them, they retracted into their shells. The heads don't retract, being a bit too big for that. When in that position they look like boulders. What have you been doing, Craig? Seen any boulders walking about?"

"My boulders walk on their hind legs," Craig replied. With typical caution, he kept his report very brief, saying only that he had seen large numbers of the turtles. He made no mention of the fact that he was still surrounded by them, although he warned Barney and Tim about the acid throwing.

"This little habit would be a considerable menace to colonists without overlanders to retreat into," he said.

"You must have hold of a different species there, Craig," Barney said after a pause. "My babies haven't learned to walk upright yet, never mind throw acid. Sulphuric acid, you say? Where would they get that from? You don't suppose they build their own Glover towers?"

Tim answered his question.

"I've found samples of normal salts that would be useful in preparing the acid—barytes for one—but you're not suggesting these creatures have enough intelligence to—"

"I'm trying to avoid suggesting anything at the moment," Craig said dryly.

Recognizing the note in his voice, Barney dropped that line of approach and tackled Tim:

"What do your turtles do, Tim? Are yours vertical or horizontal?"

There was a second's silence, and then Tim said in a strained voice, "I haven't seen any round here at all. . . . Hang on, will you? Something's moving outside. . . ."

HE went off the air. Craig sat where he was, eighty miles away over the mountains, drumming his fingers and trying to visualize what was happening. He knew, with a half-mystical certainty, that any planet was a different place by night from its daytime self; ask any child on Earth and they would say the same thing. The atmosphere changed. . . .

By now the darkness was total. Thunder grunted disconsolately round the horizon like distant gunfire.

Tim's voice came back in a minute, a note of relief in it.

"Hello, Craig and Barney. I've got the turtles too! Most curious. There must have been a crowd of them hereabouts, but during the daylight they were absolutely doggo. I took them for big stones—your boulders, Barney. Now they're getting up and walking about."

"See they don't pinch the space ship," Barney said. "Are yours travelling on all-sixes?"

"No. They're walking on their hind legs—or on their two hind pairs, like Craig's. They're pretty busy, too. Some of them are trying to investigate the overlander. What do I do?"

"Shine a bright light and they'll keep their distance," Craig advised.

"I've all ready discovered that."

"Good boy." Craig had to suppress an urge to be fatherly to Tim; his voice sounded very young over the FM. He could not resist adding, "And don't let them throw acid at you. It's painful."

"Are you keeping something back from us, Craig?", Barney growled. "You're not having some sort of trouble with these critters, are you?"

"You sleep tight, Barney, and don't worry. I'm fine. We'll buzz each other at eight tomorrow morning. Adios and out."

So they closed down. Barney scratched his head, feeling sure

Craig was holding something back. He knew Craig of old. Both Craig and Tim sounded like they were having a more interesting time than he was himself. Promising himself that tomorrow he would go hunting turtle eggs and try a little private research, Barney settled down to read a book.

It was a collection of Conrad's tales. To Barney Brangwyn's mind, only Conrad of all the old authors conveyed the sense of a planet as a planet. He read: ". . . Nothing moved. The fronds of palms stood still against the sky. Not a branch stirred along the shore, and the brown roofs of hidden houses peeped through the green foliage, through the big leaves that hung shining and still like leaves forged of heavy metal. This was the East of the ancient navigators, so old, so mysterious, resplendent and sombre, living and unchanged, full of danger and promise. . . ."

As another sort of 'ancient navigator', Barney knew that what Conrad had written almost exactly six and a half centuries ago contained a true vision of the universe: that behind all the sunlight, however vivid, lay an impenetrable darkness which could be expressed in scientific terms as energy or in religious terms as God. Whatever he or the turtles might do, that dark-

ness remained—yet he could hold that concept in his mind and at the same moment hope to outdo Craig.

BEFORE Craig retired to his bunk, he took a look at the creatures surrounding his overlander. They were still outside the circle of light, still active, though perhaps less so than they had been when down by the shore.

He stood for a long while, stolid and unmoving, looking out. The thunder was dying now as night fully established itself.

Craig considered. These creatures seemed to have three different patterns of behavior over a remarkably small stretch of territory. Where he was, by the coast, they behaved like a true Plimsol species; they were active, aggressive, curious. Where Tim Anderson was, their activity was nocturnal only and they seemed slightly less formidable. Where Barney Brangwyn was, they behaved merely like lower animals—like clumsy tortoises. There had to be a reason for this curious deviation, but as yet Craig had insufficient data to uncover it.

Abruptly he turned from the window, and climbed into the cab. Getting into the driver's seat, he started the engine and drove the overlander further up the long slope onto level and

higher ground, until he estimated he must be about three miles from the coast. Then he went to see what the turtles were doing.

Most of them followed the overlander; they covered the ground steadily, if not as vigorously as they had moved hitherto. Many seemed to be suffering from very human bouts of indecision about coming on or going back. Eventually some forty of them grouped themselves beyond the range of Craig's light and sat themselves down to wait.

Shaking his head, he went to his bunk.

The puzzle was still with him. Unable to sleep, Craig rose again after twenty minutes and went to the little laboratory. There he pulled from the deep-freeze the remainder of the turtle who had been caught in the caterpillar tracks and began to dissect it.

He concentrated on the head first. The face was closely scaled with chitinous scales. The antenna was cartilage, and scaleless. The mouth was tongueless, with amazingly strong teeth which scooped sharply forward in the lower jaw. Pulverizing one of them and analyzing the powder, Craig found it to consist principally of iron tungstate and magnesium phosphate. Mineral substances lodged between the other teeth made it clear that these tough little weapons

could be used for digging into softer rocks. A quick examination of the digestive tract indicated that much of the turtle's nourishment also consisted of minerals, broken down by microorganisms so that they could pass into the bloodstream and nourish the body tissues.

The turtle's single eye was a wonderful organ. As he worked under an optical microscope, Craig recorded his findings on tape.

"... The turtles have both night and day vision," he said. "Their visibility spectrum must be much wider than ours, enabling them to see into both the infra-red and the ultra-violet. This is of course consistent with what one would expect from a cloud-obscured world like Askanza VI, but it also indicates a species coping with its environment with considerable success. 'Turtle' is a misleading name for these creatures, and I shall hereafter refer to them as pseudo-chelonia*. We shall then be less likely to underestimate their intelligence.

"Now I am going to open the brain case and examine the brain ..."

The skull was extremely dense, almost defying Craig's

* *Chelonia* is the sub-class of reptiles comprising such animals as tortoises, terrapins, and turtles.

best saw. As he increased revs on the motor, the saw moved faster, biting down into the curving bone. Suddenly there was a loud explosion and the skull cracked.

Craig stopped the motor. Picking up the skull, he examined it. With a needle torch he peered into the hole the saw had made. The report had been caused by an implōsion, not an explosion. The pseudo-chelonia had a vacuum where their brains should have been! Dividing the vacuum space, in place of grey matter, were only one or two bony and bare shelves.

Craig stared down in amazement, and the solitary eye stared back at him.

He thought incongruously of what Tim had said over the wireless: "... the millions of years of peace it's had ..." but what sort of peace had reigned in these bony cavities over those long years?

THE dun-colored morning dawned to the tune of more thunder, which died away in half an hour. Craig woke late. He looked outside as he dressed.

Certainly the view was impressive, if bleak. With the rain holding off, he could see some distance in all directions. Behind lay the mountains, rounded and bland. Ahead, the great planes of land sloped down to-

wards the sea, hiding it from sight. All around were only simple shapes, rarely broken by a stunted tree.

The pseudo-chelonia lay silent, like boulders left by a mighty outgoing tide. Only one or two of them stirred feebly.

Grabbing a bar of condensed ration, Craig jumped down onto the ground. He chewed his breakfast as he walked. The creatures spread raggedly. Yesterday's tyrants were today's sluggards; nearer the overlander they were still as stones. Further away, down the slope, one or two moved on all-sixes as if in pain towards the distant sea.

Craig sat on the nearest specimen.

"You certainly have something to contend with," he remarked, tapping it reflectively, "And I think I have an inkling as to what it is."

When he had finished his breakfast, he rose, grave and solid and methodical, to make the group call.

"I could have had turtle eggs for breakfast, only I didn't fancy their metallic content," Barney announced. "I don't mind living off the land, but not when it's so indigestible."

"I could have had some too," Tim said. "I've been up most of the night watching, and I've seen these—what do you call 'em, Craig?—these pseudo-che-



lonia laying eggs in approved turtle style. And then along came three creatures like alligators and made a spirited attack on the egg burial spots."

"Interesting," Craig commented. "What happened?"

"The pseudo-chelonia made a spirited defense. They warded off the alligators with acid contained in clay cups. Despite that, two of them were killed and a lot of eggs taken. These alligators are fast and tough. I was able to film the whole incident for the record."

"Can you see anything of them now?"

"The alligators? No. They made off before dawn. And then

with the light and the thunder, the pseudo-chelonia just seemed to be overcome by sleep. I can see a few of them now, all absolutely motionless, looking like boulders again.

"Ah well, I'm going to bed for four hours."

"We'll be calling you," Craig said. "Adios and out."

He had his day's program all planned.

AVOIDING his yesterday's route, he drove down to and then along the coast. The beautiful pillars still protruded from the sea. Overhead, cloud still merged with cloud everlastingly. The pseudo-chelonia were

still active, and thickly distributed along the sea's margins.

Today their activities were more comprehensible to Craig, in the light of what he knew about their habits and their metabolism.

Mainly they appeared to be building—or rather, turning rocks into buildings. This they could do in two ways, dependent on the nature of the rock with which they dealt: either by scraping away the rock with their teeth, or by pouring acid into the metallic veins in the rock and then pulling the uneaten rock away. These proceedings accounted for many of the curious rock formations the PEST had seen.

Craig also knew that much of the creatures' actual food came from the rock. Like plants, they had the ability to convert inorganic matter into the living substance necessary to all forms of animal existence. And through his binoculars he soon observed the skill with which the pseudo-chelonia, beings without fire, prepared their acids, collecting and dissolving salts in little hollowed bowls of rock.

Several times armed parties came up to investigate the man who was investigating them. Craig avoided a crisis by moving on.

At last he came to the raised earthwork he had seen on the

previous day. Unmistakeably, it was artificial, built by hundreds of determined flippers working in organized fashion.

From its look, it might have stood for centuries. Craig did not inspect too closely, since several pseudo-chelonia were inside it. Instead, circling them, he brought the overlander to the other side of the fortification—and here he found the remains of the enemy against whom the fortification had been built. A litter of bones and skulls told Craig he was looking at the end of some of the alligator species Tim had described.

Selecting a fresh skull, Craig stowed it away before driving on another hundred yards to get further from the earthwork. Doubtless this was no man's land between alligator and turtle territory, but it was the first unpopulated stretch of shore he had found. A fast and cold river flowed down into the muggy sea. The pillars that grew here were few and stunted. Craig drove right down to the waterline, hurriedly launched a collapsible boat, and chugged out to a pillar that rose only three feet above the waterline. On his way he picked up a sample of sea water for analysis.

THE pillar was brown with patches of blue, the colors glinting even in the dull light,

and just too thick for Craig to get his hands round.

When he hacked at it with a knife, it splintered easily. In little time, he had the stump of it in the boat and was back ashore.

He had cut things fine. Several pseudo-chelonia were coming rapidly along the beach, flinging themselves over the earthwork and running towards him. Putting the pillar stump and his water sample into a deposal locker, Craig collapsed the boat and snapped it into a side rack. He swung himself up into the cab just as the first creature burst round the corner, flippers swinging.

It took a snap at him. Missing, it took a bite at the overlander instead. For many a long day, the heavy metal of one wing bore the imprint of tooth marks, the most awesome teeth Craig had ever come across. Given half an hour on their own, these chaps could have wrecked the big vehicle utterly.

But now the overlander was speeding off, out of harm's way. Accelerating, Craig shook off any pursuit before stopping in a shallow inland dell to examine the specimens.

As he had long suspected it would be, the pillar was natural, an alien accretion similar to the coral reefs of Earth. It consisted of crystals of metallic salts, iron chloride and copper and

nickel sulphate among others, many of the crystals being abnormally large. It reminded Craig of a 'magic' chemical garden he had grown in water glass as a boy.

His sample of sea water proved to contain traces of many metals considered rare on Earth now, including tungsten and germanium.

WHEN he had made the analysis, Craig sat looking out over the land to the placid sea. The sea on Askanza VI covered five sixths of the planetary surface. Here as on Earth, it had cradled life. Yet here, Craig was now fairly positive, it still held absolute power even over those creatures which had long since left it for dry land.

A man had in him much of the sea from whence he came. Wombed within water, he passed through a fish stage as a foetus; born, he carried all his life a tide in his veins and the taste of salt in his blood. But for all that, he had turned his back to the beaches in a way the pseudo-chelonia could never manage to do.

It was so, at least, if his theory was correct. To prove that conclusively, he needed equipment that only the PEST ship contained. Climbing down to the cab once more, he headed the overlander for home.

RAIN came cascading down again as he touched the hills. It slowed him to little more than twenty miles an hour over the rough, so that another of Askanza's brief days was almost over before he sighted the PEST ship. Nevertheless, the journey was not entirely wasted, since it supplied confirmation that his theory was at least near the mark.

Four miles inland, all traces of the pseudo-chelonia died away. They began again after another fifteen miles; but all the creatures he saw lay face down against the bare ground as if dead, their carapaces shining dully in the yellow downpour.

Donning oilskins, squelching through the downpour, Craig hurried into the ground lock. Tim Anderson was there to greet him; the young man had seen his vehicle drive up. Something in his attitude told Craig he was uneasy.

"Coming back empty-handed!", he exclaimed as he greeted Craig. "You've not much chance of indulging your favorite hobby of parasitology here, Craig."

"No," Craig agreed. "There's little diversity in the life forms, but the wonder seems to be that anything organic has established itself at all."

As they went up in the lift, Tim said, "Then no doubt you've noticed the life forms seem to

be either large size or microscopic."

"I had noticed—and I notice Barney's vehicle outside. He's back all ready then?"

Tim shot him a veiled look.

"Barney's back," was all he answered.

Barney himself greeted them in the lounge. He was consuming a plateful of canned pork, gooseberry sauce and potatoes, and demolishing a bottle of Aldebaran wine. He waved genially to Craig.

"Beat you to it. Have a drink?"

"Love to," Craig admitted, peeling off his oilskins and stuffing them into a dryer. As he got a glass, the evening's thunder began.

"Everything tied up?" Barney inquired mildly, pausing with uplifted fork.

"What makes Askanza VI tick?", Tim asked.

"By the way you both ask me, I can see you all ready know all the answers," Craig said. "Well, yes, I think I know some of them myself. I'll tell you my ideas, and you can stop me when I go wrong."

"The man's modest," Barney said.

"I admire the resourcefulness of this world," Craig said. "Its conditions are not unlike those on Earth's neighbor planet Venus which—you may remember

from your elementary textbooks—supports no life at all. Here we have at least two tough forms of life, the pseudo-chelonia and the alligator-things, which have managed to evolve despite an almost complete lack of anything but minerals. Minerals there are in abundance, which as Tim says should make this a very prosperous world *if* the colonists move in.

THE earliest forms of growth here—pre-living forms—are crystal accretions, which rise out of the shallow seas like masts. I've seen them along the coast. When I first saw them, I had the impression of wireless masts—and oddly enough I was not far wrong. However, perhaps that is not the right end to begin the story at."

Barney and Tim exchanged glances as Craig went on.

"Let's take the turtles first. They have no brain in any sense that we know of. Instead, they have nature's equivalent of a wireless receiver in their heads. There is even a vacuum in the middle of their skulls, where bony shelves impregnated with metal form a natural triode valve. The alligators function on the same principle."

"They do," Tim affirmed. "I shot one and its brain case imploded."

"Yes. No smaller reptiles exist

because a big heavy head is required to house such an arrangement.

"Their motive power is of course their own. But their—shall we say their thoughts, primitive though they are?—their thoughts are radio waves.

"Life, as we know, develops as it can. We must expect that eventually research will show why these creatures have receivers instead of brains. Nature, however, works with what it has, and here it had a perpetual source of radio emission.

"For me this is the most interesting fact of all. The silent seas of Askanza are gigantic low-powered transmitters. How it works in detail I don't know, although I suggest we find out tomorrow. Roughly, though, the main items would seem to be these. Cold levels of water from rivers etcetera sent up temperature differences in the sea which are transformed into small electric charges. These are influenced by the heavy metallic suspension in the seas. At the same time, the water containing germanium, various depths act in effect as gigantic transistors, amplifying the potential signal.

"The crystal pillars serve as aerials. Day and night they radiate the message of the sea, and the pseudo-chelonia and their enemies pick them up. Do you follow this, Tim?"

TIM shook his head, moving from the window where, as he listened, he had been watching the first motionless turtles come to life with the night.

"I'm with you, Craig, although the way you've deduced all this fills me with wonder and anguish."

"I've only fitted together the facts we discovered—and kept an open mind, remembering the old PEST rule, 'Necessity forms the only basis for comparison between systems.' What we find on Askanza VI is the best possible operable system in the circumstances."

"That's all very well, Craig, but what first started you adding the facts towards the right answer?", Barney inquired. Lighting a cigar, he added, "And don't be afraid to boast. You don't know how oppressive your modesty can be."

Craig smiled.

"Then I must boast on your behalf. You gave me the lead with your remark during our first group call. You talked about the curious mush you picked up on the short wave. That was the call of the sea—calling all life on Askanza!"

"Ha!", Tim exclaimed. He snapped his fingers and started walking round the room.

"Craig, the next bit I pieced together for myself," he said. "What Barney said started me

wondering too, particularly when he mentioned sky layers. Obviously the atmosphere is disturbed; thunder night and morning must mean something. What it means here is that the Appleton or F-layer which normally reflects short waves back to the ground is dissolved during the day. During the night-hours it re-establishes itself. Barney and I have proved this is so with the ship's transmitter.

"Working on the idea that our turtle friends were controlled by short wave radio, I saw this would explain why they were doggo by day and active by night. The signal would not reach them by day, but would radiate into space and be lost.

"Then I asked myself why your turtles and Barney's didn't fit with this neat theory. Directly I thought of locating the transmitter by the coast I had my answer."

"Yes, when you get that far, the rest's a matter of elementary radio theory," Barney said. "The coastal creatures get their transmission direct, so the presence or absence of an F-layer doesn't worry them. Up to maybe three miles inland, the beasts are active day and night, as Craig found. I was on the fringe of a skip area, where the ground wave's given out and the sky wave only reaches under freak conditions—but on planetary

scale, such freak conditions must be pretty prevalent. Perhaps my beasts were explorers, shuffling along in a land where for them thought would hardly reach. Put like that, it makes them sound oddly impressive."

"They are impressive," Craig agreed. "And right now I can hear some of them clumping round the ship. Tim, better switch on external lights before they eat their way in."

OBEDIENTLY, Tim climbed up into the cabin and punched the external switch-board. Barney and Craig were watching the pseudo-chelonia scamper heavily for the darkness as he returned.

"It's all clear enough," Tim said, "except for one thing. God, I know it's impressive, this tideless sea broadcasting its message for millenia, and every creature on the planet picking it up. But—*what does it say?*"

Craig spread his hands wide.

"What does the sea still say in your blood, Tim? Something simple in its origin, infinitely complex in its working out; in a word: Survive! The turtles are our brothers in that they are doubtless getting the same message."

For a minute they were silent, each occupied with his own reflections. Craig was the first to speak again.

"There's one further point, Tim," he said. "Just now you mentioned that the pseudo-chelonia were *controlled* by radio. I don't think that is any more accurate than saying that humans are controlled by thought. They seem more to be *guided*, as we are guided; it may sound a subtle difference, but it's a big one. Their movements show primitive signs of individuality: hesitation, for instance.

"Finding out exactly how they behave within their own groups will be valuable work for the scientific bodies who'll follow us. It should shed a lot of light on human impulses."

He stood up, his face clouded.

"And so we've got everything taped. Or have we? We know in outline how the Plimsol species ticks. We know it's plenty tough. It can live on dirt and bite through anything, while I'd say one of those fore-flippers could break a man's leg. But there's only half of our task. Little as I love colonists, I hate to think of them facing up to these armored monsters and buckshot. My prediction is that they won't take long to lose their fear of bright lights. They may be generally doggo in the daytime, but who wants to die at sunset? In short, what recommendations can we possibly make to PEST HQ about dealing with the brutes?"

Grinning, making a rude sign he had picked up in a dive on Droxy, Barney stood up.

"That sounds like a cry to your man of action," he said. "This is where I come in."

Craig emitted a hollow groan.

"Tell me the worst," he invited.

"No, I've something to show you in the control room," Barney said. "While you and Tim were cogitating so powerfully yesterday, I was after turtles' eggs, if you remember. I found I couldn't eat the things, so I hatched 'em in an improvised incubator. Come have a look-see."

HE LED the way up into the control room, smiling as he went. He hated what he had discovered, and he knew Craig would hate it even more; that did not prevent his seeing the diabolically funny side to the whole business.

On the control room floor was a heavy box with a visiplex top. Inside it, on a layer of sand, lay three baby pseudo-chelonia, each measuring about a foot long.

"Good heavens!", Craig exclaimed. "How old are they?"

"About a day old. You've not seen the eggs. They're as big as cannon balls and almost as heavy. The female only lays about half a dozen at a time—

and that must be a pretty painful process. Better her than me."

Barney showed Craig how he had screened off the box, so that even though it was night and the F-layer established overhead, no radiations were getting through to the three creatures.

"Otherwise they'd be biting tunnels through the hull," he said. "Believe me, these babies have milk teeth like buzz saws."

He went over to the transmitter on one side of the room, unhooked an aerial, placed it in with the pseudo-chelonia and returned to the set. He switched on, starting up a music tape.

"Just in the interests of science," he said grimly. "I am going to give these babies a snatch of Debussy's 'La Mer' on their frequency. Here it comes."

Craig and Tim heard the music, damped right down, from the tape player. Barney's babies heard it in their heads. At once they began to move.

They moved uncertainly, like puppets twitched by the hand of a drunkard. First they went forwards, then they went backwards, then they shuffled sideways. Their heads rolled in ungainly fashion. Their six limbs retracted then shot out again. It was horrible to watch them.

"That's enough, Barney," Craig said.

"I'll give 'em a bit more volume," Barney said, twiddling a knob.

At once the pseudo-chelonia were seized by convulsions. They leapt and bucked like unbroken steers, clattering against the side of the box, waving their limbs frantically, wagging their antennae. They threw themselves about like creatures gone crazy, even twisting onto their backs and running into each other.

"All right, Barney, turn it off," Craig said, in a shaken voice. Tim Anderson too looked slightly rattled.

"Those beings are blessed—or cursed!—with intelligence," he said. "Think how they must feel with an alien madman bawling inside their heads."

"Horrid, I agree," Barney said flatly. His three specimens slumped back into immobility as he switched the radio off. Leaving the tape recorder still playing its quiet melody, he got up, returning Craig's straight stare.

"And that's how the colonists are going to cope with our Plimsol species," he said. "Just a little demonstration for you, Craig. The miners and farmers who touch down here in a year or two aren't going to need shotguns or blasters. They only have to switch on the short wave to burn these critters' brain boxes

out. . . . It's not pretty, but it's simple—and nice and safe. Why are you looking so grim?"

Tim, recovering, slapped Craig on the back and said, "At our moments of triumph, our leader always turns philosophical and sad."

MAYBE you're right," Barney said, leading the way back to the lounge and the bottle of wine. "He will now tell us that we've done our stuff in record time, but that nevertheless we are degenerate. The ancients, he will remind us, had a saying 'to understand all is to forgive all'. And now the PEST motto means something less than that. 'Capite Superare': 'Comprehend To Conquer' . . . Shows how the race is going downhill . . . Have a drink, Craig."

"I will," Craig said mildly, holding out his glass, "when you've finished bullying me."

As the three of them drank, he said, "If I looked grim, it was because I realized something you may have overlooked."

He sat down in a chair and surveyed the two of them.

"After your demonstration, Barney, we can do nothing but send off a report that will soon bring the colonists flocking in. Askanza is going to be a tough planet for a long while. It's going to demand a lot of work from everyone."

"We should worry," Tim said.

"Yes, we *should* worry! You think the colonists will kill off the pseudo-chelonia by Barney's method?"

"Of course. What else?"

"In no time, one colonist brighter than the rest is going to find a way of broadcasting—not death, but something more deadly—orders. It won't take them long to find out a way either; you know as well as I do what the main sort of colonist is like: he's society's misfit, a reject. How many millions of these tough beasts do you think there are on Askanza? In no time they'll be transformed into a radio-controlled army, working, dying, killing, for a few tinpot tyrants crouching behind transmitters."

BARNEY spilt half his drink down his beard.

He jumped up.

"My God, Craig, you have the nastiest ideas!," he said.

"You think I like them? It makes me shudder just to think of the future of Askanza—but as Pontius said, once I've filed my report it's out of my hands."

Tim gazed fearfully out of the window. Beyond the ring of lighting, the turtles waited for they knew not what. Beyond them was only the blackness, warm and unlit. And beyond that blackness: a deeper blackness.

"Our job's finished," he said. "Let's get to hell out of here—and make sure we never come back."

THE END

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