SEA CHANGE
by Bertram Chandler

John Willis sat uneasily on the hard bench that ran along one wall of the Federal Employment Bureau. Now and again he tried to read the newspaper that he had bought (and could he afford the fifty cents? he had asked himself) on his way to the bureau from the Transients' Hostel. A colony on the Moon. . . . Men on Mars. . . . A manned laboratory in orbit about Venus—and none of it front page news. The big hemlines had been reserved for the Fourth Test Match between Australia and the U.S.A., currently being played in Melbourne. And rightly so, he thought with wry humor. Americans taking up cricket, of all games, was far more fantastic than the facts of the astronauts.

Somebody was calling his name, "Captain Willis!" He got to his feet, bundling up the morning paper. He walked to the counter. He found it hard not to look at the firm, fully exposed breasts of the girl who had summoned him.

"Yes?" he said. "Yes?"

"Your personal data has been processed, Captain. It so happens that there is a vacancy for a master in one of the paper pulp tankers operated by the Ministry of Timber Products. You will report to their Dock Office at 1045 hours this morning."

"But, Miss. . . ." He looked down at the little sign on the polished surface of the counter in front of her. "But, Miss Vitelli, there must be a mistake."

"The Computer never makes a mistake," she told him severely.

"But, damn it all, I'm nearly eighty years old."

"Legally speaking," she said, "you're forty-five."

Legally speaking—and biologically speaking. He could see his reflection in the mirror-like finish of the counter. He looked just as he had when, having won the first prize in the Opera House Lottery, he and Jane, his wife, had decided to make another gamble. The doctors had told him that he had only a year to live. But, in the U.S.A. there were already the facilities for stasis, the so-called Deep Freeze. Jane had accompanied him—to America, and then into the cold and dark that might well be eternal. But it had been only a little more than thirty years.

He looked younger now than he had when the decision had been made. His face was still rugged, but the wrinkles had vanished from about the blue eyes, which had lost their faded quality. His hair was still dark—and, in fact, the first streaks of gray had disappeared.

Even so. . . .

"But you don't understand," he told the girl. "I passed for master way back in 1945, during the Second World War. Even at the time when I was . . . suspended, in 1967, there was so much new, electronic navigation and the like, that was not covered by my certificate."

"Nonetheless," she stated, "you were sailing as master then, in 1967. And your qualifications were valid. And still are. And if the Computer says that there is nobody else immediately available for this job—that's all there is to it. Of course, if you don't really want it . . ."

"I'm afraid that I do. The first prize was a lot of money back in 1967—but it was whittled away. Storage charges for two—and the operation. We aren't quite paupers—but we're not far from it."

"And this is the only sort of job that you're likely to get." The girl handed Willis his papers in a big, plastic envelope and said, very definitely, "Good morning, Captain."

Back in the cramped, temporary apartment that would have to do until he and Jane found something better he unpacked, bringing out from the suitcases the clothes and other possessions that, like their owner, had been in cold storage for a third of a century. The clothing was useless, most of it, although he put to one side the uniform cap with the golden laurel leaves on the visor. He would have to change the cap badge—but the dull, well-weathered artificial foliage would be preferable to something glaringly new. Then there was his sextant. He would want that. And his reduction tables ...

"I must go down to the sea again ..." quoted Jane, rather bitterly. She was a tall girl, slim, darkly auburn, with a mouth too wide and features too strong for conventional prettiness. But, even in her

discontent ("I should have known," she had said, shortly after their arrival back in Sydney, "I should have known! All of our friends either dead or with one foot in the grave! And everything changed! And the fashions!") she was rather beautiful.

"It's a job," he said. "And not a badly paid one. I've skimmed through this newfangled Award of theirs. Four weeks on, rather hard running. Then two weeks off. And annual leave on top of it."

"I thought that it was temporary appointment."

"At the moment, yes. But the permanent master of Pulpster is going on his annual leave and it's not certain that he'll be returning."

"Retiring?" she asked.

"No. Bettering himself. The bright young men don't want to spend their lives crawling around the coast at fifteen knots, not even in the big bulk carriers. The hovercraft, roaring across the Tasman at ten times that speed, are the glamor ships these days."

"And I suppose the pay is higher, and the conditions better."

"Yes."

"Do you think that you . . . ?"

"No," he told her regretfully. "They'd be out of my class. I've a ten knot mentality, although I should be able to cope with fifteen."

"Still," she said a little more cheerfully, "you've got a fresh start. And you haven't got to begin again at the bottom."

"Insofar as rank is concerned, no," he agreed.

He rose early the following morning, showered, shaved (this newfangled depilatory cream was a blessing) and dressed. He said good-by to Jane. She had wanted to come down to the ship with him, and he would have liked her to have done so, but he knew that he would be far too busy in the brief hours between arrival and departure. He carried his baggage from the bed-sitting room to the elevator, rode down to the lobby in solitude. The sleepy night clerk ordered him a cab.

The driver, during the ride down to the harbor, was talkative. The breed had changed little, if at all, over the decades. Willis made a pretense of listening.

The first daylight was coming in when the cab drew up off Pulpster's berth. Her new captain paid off the driver, wincing inwardly as he parted with notes that, in the old days, would have represented a day's pay. He realized that his own salary was big only on paper. He stood beside his little pile of baggage, shivering slightly in the morning chill. He noticed that the linesmen were waiting along the edge of the wharf. A man in uniform—Willis recognized the Maritime Services Board cap badge—walked up to him. "Joining her?" he asked.

"Yes."

"Shouldn't be long now. She's just passed under the bridge."

"Good."

"And you're the new skipper?"

"Yes."

"Haven't seen you around, Captain."

"No. I've . . . been away."

The official gave Willis a curious look, then turned his head. "Here she comes now. Just rounding Miller's Point."

Yes, here she came—low in the water, rust-colored from truck to water line, with a high mast, sprouting antennae, that was a logical upward extension of the bridge superstructure a little forward of amidships, a green funnel (the one touch of color) protruding from a low house on the poop. She stood in through the wide opening where the Pyrmont Bridge had been in Willis' time—and then, just abaft her raking stem, there was a flurry of foam and another, more violent turbulence under her cruiser stern. Full astern and transverse thrust, thought Willis. Not having any more to rely on tugs which, sometimes, did as they were told and which, all too often, thought that they knew best. He was looking forward to handling this ship.

She came alongside beautifully, swinging short round under the influence of her propulsive and

maneuvering screws, seeming, at the finish, to be moving laterally through the water. Weighted heaving lines were thrown from fo'c'sle and poop; that technique, almost as old as ships themselves, had not changed. But the mooring ropes that the linesmen manhandled ashore, casting the eyes over the bollards, were fantastically light. And so was the manning. An officer on the fo'c'sle head, with one rating only, and another rating on the foredeck to handle the forward backspring. An officer aft, with one man for the stern line and another for the after spring. With self-tensioning winches—and no featherbedding—that was all that was required.

He watched the hands coming off stations—making all fast fore and aft was no longer a time-consuming operation—saw the gangway mechanically extruded as somebody, somewhere, pushed a button, looked with interest at the connecting up of the shore pipe lines without all the fussing with nuts and bolts and flanges that he had been used to thirty years ago.

He picked up his briefcase and his sextant case—he hoped that the A.B.s of this day and age did not consider it beneath their dignity to carry the master's gear on board—and walked up the metal gangway, the self-adjusting threads rattling ever so slightly under his feet.

Captain Harlow was a tall man, dark of hair and complexion, neat in his sharply creased khaki, possibly in his mid-thirties, if not younger. "Welcome aboard, Captain Willis," he said. "Old Dalby condescended to let me know that I was being relieved this time in. Sit down, Captain. Make yourself at home. After all, this is your home now."

Willis seated himself in one of the two easy chairs, looked around the day cabin. It could have been worse, much worse. The bulkheads were textured plastic paneling, the uncarpeted deck was covered with softly resilient tiles in contrasting and complementing colors. On the desk stood a small-screen television set. And on the low coffee table, between the two chairs, was the inevitable silver tea service, with a large plate of hot buttered toast. This had been brought up by one of the two stewardesses—a pleasant young woman whose uniform, rather to Willis' relief, did not leave her breasts exposed. He had never liked women aboard a ship—and if he had to have them he preferred them decently covered.

"Sorry I've no time to show you around properly," Harlow said. "But it's always a mad rush in Sydney. And at the other end. By the time that we've taken care of the legal side of the hand-over it'll be sailing time. But the mate'll show you what lives where, and what it does."

"Captain Dalby put me in the picture," said Willis. "Two hundred and seventy feet over-all. Fifty-foot beam. Three thousand tons deadweight—but a couple of dracones just in case they want us to tow a few tons extra. Turboelectric drive. Nuclear power. . . ."

"You have been doing your homework."

"When one has been away from the job for thirty years, Captain Harlow, one has to."

"Thirty years? You're joking."

"I'm not."

"Then . . . then you're a resurrectee?"

"I'm afraid so."

"Cheer up. You'll find this job a piece of cake. There's precious little new in the way of navigational equipment—this isn't, after all, one of the trans-Tasman fliers. And the officers all have recent certificates—the chief officer has his mate's, and the second and third both have second mates'. They'll put you wise to anything you aren't sure about. And now I'll get showered and changed, and then we'll have breakfast."

During the meal Willis met his officers. There was Darryl, the mate, who looked to be about Willis' own biological age, a short, swarthy man with lank, thinning hair and a perpetual scowl. Taylor and Brown, second and third officers respectively, could almost have been twins; both were tall, thin-featured, and with almost white hair. Carter, the engineer, pale-skinned and black-bearded, looked more physicist than mechanic. Miss Wendover, the electrician, was a rather bulky and brawny brunette, who, Willis guessed, would look and feel more at home in her overalls than either in uniform or a civilian dress.

These were the only officers, and apart from them the crew was a small one. There was the plump, motherly Mrs. Livermore, the chief stewardess, and the neither plump nor motherly Miss Lewisham, her

blond assistant. There were no cooks; the ship was well stocked with deep-freeze meals. As for the rest—there was a leading hand, three general purpose ratings and a deck boy. There was little work to be done aboard this automated ship, not even the perpetual scraping and painting that had kept the hands busy when Willis had been last at sea. The steel from which Pulpster was built had been allowed to rust while she was still on the stocks—and that rust was the protective coating against further corrosion.

Harlow was anxious to get off the ship and to sign clear. Willis accompanied him ashore and, after his name had been put on the register at the customs house, was driven round to the shipping office to sign the articles of agreement and to make the necessary entry in the official log. Then, with these documents in his briefcase, he returned to the vessel. It was almost sailing time. He changed hastily into his new khakis, picked up his binoculars, and then climbed the companionway to the combined wheelhouse-chartroom. He overheard the tail end of a conversation before his three officers were aware of his presence.

"What gripes me," the chief officer was saying, "is that my certificate, although it's only a first mate's ticket, is worth a damn sight more than his. He passed for master way back in Captain Cook's day, before electronic navigation had been dreamed of. But his precious piece of paper is still valid—and I'm qualified to sail only as mate ...

Willis backed quietly down the companionway, and then made quite a deal of unnecessary noise coming back up.

Willis managed. His Sydney pilotage exemption was still valid, and the renewal of his Hobart exemption—which expired after five years if not used in that period—presented no great problems. And there had been no major changes in either port, looking at them as seaports, since his withdrawal from circulation. Sydney still handled conventional vessels—although most of them were either container ships or bulk carriers. Bate Bay, to the south of the oil tanker port of Botany Bay, was the hovercraft port for New South Wales, and there the traffic from "the farm," the islands that were now called North Zealand and South Zealand, roared inland with hardly a diminution of speed.

But the hovercraft were no concern of Willis', neither were the huge bulk carriers nor the big container ships. He shuttled back and forth in his little Pulpster, with his long pilotage at the Port Huon end and his short, but rather more wearing, pilotage at the Sydney end. But this was far easier than it had been when last he had worked the port. Now there was a television screen in the wheelhouse, and on it was presented an over-all aerial picture of the harbor. Now he could see what was on the other side of every corner before he started to turn it.

Insofar as the other electronic gadgetry was concerned he was reasonably happy. Radar he was already familiar with, and gyro compass, and automatic steering, and echo sounding. He liked the met. screen in the chartroom that, at the push of a button, would show either an up-to-the-minute meteorological chart of any selected area or—but this, although fascinating, was of little practical value—a TV picture of the Earth's atmosphere transmitted from whichever satellite was best sited to provide the coverage. He was rather sorry that his ship, being only a coaster, was not fitted with the equipment required for navigation by artificial satellite—he would have liked to have been able to play around with it—but yet he sneered at the Decca Navigator as a useless luxury. (That, of course, had been in existence before he was put into his cold sleep, and he had been one of those opposed to the establishment of a chain of Decca stations around the Australian coast.) "You're just putting yourself at the mercy of a single fuse. . . ." he told his officers and, rather to their distress, insisted on doing his own navigation, the old-fashioned way, with sextant, chronometer, ephemeris, and reduction tables, when crossing the stretch of open water between the mainland and Tasmania.

The ship handled well, very well, and it had not taken him long to get the feel of her. The only fly in the ointment was the unavailability of any other master to relieve him for time off when he had his four weeks in. Officers came and went and returned, as did ratings, but for Willis it was watch on and stay on. With a discharging time of only six hours he rarely saw his wife, especially after she returned to her old trade as a designer. He did see the apartment which she had taken for them, but was never able to sleep there, was rarely able to enjoy a meal there.

But, as she pointed out, it was a job, and a reasonably well-paid one, and the time off not taken was

accumulating.

And then it happened.

It was in the small hours of the morning, and the ship was fifty miles south of Gabo on her northbound voyage. It was the alarm bells that awakened Willis—but if they had not done so the cessation of engine hum would have aroused him. He had pulled on his dressing gown and was on his way up to the bridge when he heard his telephone buzzing. He ignored it. It would only be the second mate trying to tell him that the engines had stopped.

The combined wheelhouse-chartroom was in pitch darkness. Everything was dead—steering compass repeater, the dials of the Decca Navigator, the radar display unit, the clock of the Chernikeeff Log, all the pilot lights that had reminded Willis, more than once, of Christmas tree decorations. He saw the second mate, a shadowy figure standing by the intercommunication telephone. But that had worked. It should have done, anyhow. The system, like the alarm system, was battery-powered.

"What's wrong?" he asked.

"I . . . I don't know, sir. The engines have stopped. . ."

Willis bit back a sarcastic rejoinder. Ask a silly question, get a silly answer. All that he said was, "Don't ring the chief. It always annoys engineers to be pestered by the bridge when they're up to the neck in trouble. He'll let us know, in his own time. But where are we?"

The second officer found a torch, and by its light Willis examined the lattice chart. The ship was in no danger, and the rising westerly wind would blow her out into open water. But, now that she had lost her steerage way, the motion was becoming uneasy.

The intercom telephone buzzed. Willis groped his way to the instrument, pulled the handset from its clip. "Master here."

"Chief here, Captain. I needn't tell you that she's stopped."

"You needn't. How long before you get her going again?"

"You'll have to call for a tug."

"As bad as that?"

"Yes. As bad as that. Damn it all," the engineer swore, "you wouldn't read about it! A modern, nuclear-powered ship buggered by the sort of breakdown that used to happen in the very first turbine steamers!"

"What is the trouble?"

"A leaky condenser, that's all. Salt in the feed water. The turbo-generators have had it, in a big way."

"What about some lights? And some power—we shall need that for the radio."

"That shouldn't be long. Lecky's on her way up to start the emergency jenny. . . ."

From the after end of the accommodation there came an irregular mechanical coughing that suddenly steadied to a healthily rhythmical beat. Lights came on throughout the ship—not all of them, only those on the emergency circuit. Then, shockingly, they flared explosively, flared and died. From the radio telephone console there sputtered an intense blue flash; from the second mate, who had just switched the set on, there was a startled curse. There was a woman's scream from the after part of the boat deck, a metallic crash and clatter.

Willis waited for his eyes to become accustomed to the fresh onset of darkness. The acrid stench of smoldering insulation made him sneeze. He heard the watch officer say, "It must have been the governor. She was tinkering with it yesterday. The jenny just ran away with her. . . ."

"Go down and see if she's hurt," ordered Willis.

He recalled his amusement when the chief had referred to the electrician as "passion fingers. Everything she touches, she fucks up." It didn't seem so funny now.

She wasn't hurt, luckily. And the diesel generator wasn't damaged badly, not so badly as to be beyond repair. "Come daylight," promised the chief, "and we'll get right on with it. Then you'll have power for the radio." "And can the radio be fixed?" Willis asked the second mate, who had been working on it by the light from an electric torch.

"I don't think so, sir. All twelve transistors seem to be burned out."

"We have spares, surely."

"Yes. But only six."

"Why didn't the safety devices, the cutouts, function?"

"She has been working on them," admitted the engineer.

Willis grunted. "So we just sit here," he said coldly, "until such time as somebody realizes that we're overdue, and sends out aircraft to look for us. . . ."

And of course, he thought, we can use the hand-powered transceiver from the life raft to make a call. But I'll just wait and see if one of my bright young gentlemen thinks of it. And if nobody does, then . . .

And if nobody does ...

He walked out to the weather wing of the bridge. There was more wind than there had been earlier, but it would not be a violent blow—he hoped. He visualized the weather chart that he had studied on the met screen before writing up his night orders—the extensive low to the south'ard, the isobars not unduly crowded, moving slowly east across the Tasman Sea toward South Zealand.

The mate was up now. (Had he slept through the alarms, or had he just ignored them?) Willis heard him complaining bitterly because the second mate hadn't made the pot of tea with which he always started his watch. Then, when he finally realized what was amiss, he muttered, "This ship's been jinxed ever since that bloody ancient mariner joined her. . . ."

"Too right, Mr. Darryl," Willis told him, walking up to him in the darkness. "And I should have brought my albatross with me, shouldn't I? But never mind. By the looks of the weather we shan't meet the same fate as the original Ancient Mariner did."

The mate said nothing, but his silence was more eloquent than speech.

Willis went on. "It will be light by six. Get all hands out—and set sail."

"Set sail, sir?" Darryl's voice was an outraged squeal. "Are you mad?"

"No, Mr. Darryl. I'm not mad. And if you don't know how to go about it, I'll take over."

"And put that in your pipe and smoke it, Mr. Christian," murmured the second mate.

It is one thing to say, "Set sail,"—it is another thing to do it. Willis probably would never have thought of it himself if, just about the same time that he had won first prize in the Opera House Lottery, a motor ship of about the same size of his present command hadn't sailed into port after a major breakdown. Her captain had used tarpaulins, awnings, even boat covers. Pulpster had no tarpaulins and no boat covers, and her awnings were permanent fiberglass fittings. But there were the dracones, two of them, great nylon sausages, in the after storeroom. There was the huge, versatile sewing machine owned by Mrs. Livermore, whose paying hobby was dressmaking. Willis had commented on it while making rounds, and the stewardess had told him that it would sew anything. She also had with a good stock of thread, and though it was intended only for seaming female garments its tensile strength was equal to that of the sail twine of the sixties.

And Pulpster might almost have been designed with the possibility of her proceeding under sail in view. The block of accommodation, with the tall but sturdy mast rising from the bridge, was one third of the ship's length from forward. The deck between stem and bridge face was uncluttered, as it was from the after end of the midships house to the funnel. There was ample room to spread the dracones broken out from the lazaret, space to measure and mark and cut, to range and to feed the nylon sections into and through the stewardess's machine. There was a careful measurement and planning, to cut the amount of stitching required to a minimum. But the stock of thread held out.

There was power now. The diesel generator was thudding away, little the worse for its freak breakdown. There was power for the winches, and for the steering gear—when it would finally be required—and for the gyro compass. There would be enough for the met screen—the one newfangled gadget that an old-time windship master would really have appreciated—and for the Chernikeeff Log, but not enough for the other navigational aids. However, one man in the ship was used to doing without radar, Decca, and all the rest of it.

There was power for the portable welding plant that was part of the engine-room equipment—and, using it, the chief engineer (far more enthusiastic and useful than the mate) was able to convert a length of piping into a boom of sorts for the mainsail, with a shoe that fitted around the heel of the mast. The rig, when it was finished, was a queer one—"A sort of a kind of a bastard ketch . . ." said Willis. It was not

until the afternoon of the second day that the self-tensioning winches fore and aft were brought into service and the sails hoisted, the metal hanks rattling up the travelers that had been welded to the mast. Willis didn't dare to ask what had been cannibalized for these necessary fittings, but he gained the impression that the chief engineer had been quite ruthless in his ripping out of all sorts of piping that was not in use with the main engines out of commission. Yes—cannibalization, improvisation; that was how it had been in the old days before the all-powerful unions said, "You may do this, but you must not do that."

Engine-room bits and pieces, mooring lines and spare mooring lines, odd snatch blocks, and handy billies that had been loafing in the stores for years unused—everything and anything was pressed into service. The decks, at first glance, were a cat's cradle of cordage. The mooring lines, with the spares shackled to them for extra length, led aft from the forward winches—one, the halyard, to a snatch block at the masthead, one, the downhaul, through a lead block that took it clear of everything to another lead block at the foot of the mast. There was a similar arrangement aft. Then there were the sheets, the hauling parts of which had been led to the winches not otherwise in use. It was a great pity, thought Willis, that those machines could not be controlled directly from the bridge—if this had been the case he could have claimed that Pulpster was a fully automated sailing ship. . . . in any case, shorthanded as he was by windjammer standards, he would have to put her on automatic steering whenever possible.

Now his sails, such as they were, had been hoisted. He felt a pang of disappointment; they were not as he had envisaged them. They sagged and they bagged—but they drew. And, after all, he was not a professional sailmaker. The wind, luckily, had dropped to a comfortable Force 4—even so, Willis was glad that he had stayed the mast. The lee shrouds were slack, and the weather ones were bar taut. He was glad, too, that those mooring lines that had been used for stays were at least half wire; there was too much elasticity in the artificial fibers.

He stood on his bridge, looked forward, looked aft, looked aloft. Everything seemed to be holding, and nowhere were there any signs of chafe. The sheet of the mainsail, though, needed adjustment. He gestured to the second mate, who hove on it with the weather winch until ordered to belay. Bates, the leading hand, was at the wheel. Willis told him, "Port easily. Bring her round to 015. . .." He heard the clicking of the steering repeater. "015 it is, sir," reported the helmsman. "Good. Hold her at that." She was sailing as closehauled as she ever would be, seven points from the wind. She must be making leeway—just how much could be determined later. But she was sailing, and although she heeled over it was not at a dangerous angle, and with the weight of the sails holding her she was as steady as a rock, in spite of the sea and swell almost on the beam. There was another faint clicking, this time from the chartroom. It was the Chernikeeff Log. She was beginning to make way through the water.

"Mr. Taylor," Willis told the second mate, who had come back to the bridge, "you can put her on automatic. Unless there's any shift of wind we'll leave her on that, although we may have to alter course once we find out where we are. . . ."

"And how shall we do that?" demanded Darryl, who was standing beside Willis but carefully avoiding playing any part in the proceedings. "How shall we do that?" he repeated, looking up at the mast, which had been shorn of all the antennae that would have interfered with the setting of the sails.

"Don't worry about it," Willis told him. "I'd teach you how—but I've always made it a rule never to lend my sextant to anybody." He added generously, "You can watch me." It would soon be time for evening stars, and the sky was clear.

But there was something that he had to do first. Jane would be worrying by this time. "Mr. Darryl," he ordered, "have the life raft transceiver brought up here. We'll tell the world where we are and what we're doing."

"We could have done that before!" snarled the mate. "We could have sent out a distress call and been taken in tow, two days ago!"

"Yes, Mr. Darryl. We could have done. Why didn't you suggest it?"

The mate was silent—and so was the speaker of the transceiver when, several minutes later, it was brought up to the bridge and the leading hand set to vigorously cranking the handle. On its way along from the raft it had been dropped. . . .

So I'm really on my own, thought Willis. He hoped that Jane wouldn't worry too much.

He was really on his own—even though the following morning an aircraft found the ship, a relatively slow propeller-driven plane. It circled them and then, realizing that radio communication was for some reason impossible, tried to signal with an Aldis lamp. Willis himself picked up the ship's Aldis; his officers were not used to such archaic methods of signaling. He flashed OK several times. The airmen must have read it eventually; at last they dipped a wing in salute then flew away to the northwest.

He was really on his own when, during the afternoon, the wind freshened to gale force, and above. With the exception of Darryl his officers and crew were willing enough—but they were so inexperienced, they knew so little. It was not their fault. Over the years the examination room emphasis had been on technology rather than old- fashioned seamanship. As for Willis—he was realizing that he didn't know enough, not nearly enough. He had ridden out many a blow in this very part of the world—but not in a sailing vessel, a juryrigged sailing vessel at that. He had been able to put the ship's head to wind and sea so as to minimize their effects, to avoid violent, dangerous rolling, to protect his vulnerable hatches. But with no engines obedient to his command he could not do this now.

Even so, with his long experience of Bass Strait weather, he should have known better than to have made his sails with neither reef points nor any other means of reefing them. He could have taken in sail altogether—but unless he kept going he would have to ask the next aircraft to find them to send for assistance. Already the last deep-freeze meal had been heated and served and eaten, and the emergency stock of canned provisions would not last for long—and neither would the fresh water.

He stood on the bridge, balancing himself against the occasional heavy lurch, the increasing list. He looked up at the sails, the two triangles of seemingly flimsy fabric, full they were, and taut, too taut, reminding him of a toy balloon overinflated, on the very point of bursting. And how long would it be before they did burst?

He looked down and to wind'ard, flinching as the spray whipped from the wave crests slashed his face. Under the gray sky, the ragged, gray, harried clouds, the water was gray too, white-capped and streaked with foam. It was a short sea, steep and vicious. There wasn't much swell as yet, but it was building up.

The crew was ready now to carry out his orders. He had explained everything carefully, in minute detail. He had been honest with them, telling them that if he took in sail altogether—or if the sails were blown to useless tatters--probably nothing worse would happen to them than being driven, out of control, into mid-Tasman, where help was almost sure to arrive before the food and the water gave out. After all, a tanker, unless holed, is virtually unsinkable. He had pointed out the risk that the volunteer whor went up the mast would be taking.

Then, with all necessary gear assembled, Willis gave the helm order that would bring the ship up into the wind. She carried her way even when the sails ceased to draw; her design, with bridge well forward, made it all too likely that she would fall off again, but as long as the foresails were brailed in smartly the mainsail should keep her steady. Donaldson, one of the younger hands, a man proud of his athletic prowess, went up the mast like a monkey—like a monkey climbing a coconut palm in the teeth of a hurricane. The end of yet another sacrificed mooring line was fast about his waist. He made it—and still the ship showed no inclination to fall away from the wind. He clung there for a while and then, at last, working awkwardly with only one hand, contrived to get a bight of the line over the sail, and then another bight, and then another. It was slow work, and hazardous, and working those bights down to the required positions was even slower and more hazardous. But at last it was finished, and the end of the line taken to a winch and the sail brailed in.

The brailing in of the mainsail was accomplished in less time, but none too soon. After hanging in stays Pulpster decided, quite suddenly, that she would be happier with the wind on the beam. Had she come round the wrong way Willis would never have been able to get her back on to her northerly course, but his luck held.

Even so, even with sail shortened after a fashion, the crisis was far from over. The wind was still rising—Where's it all coming from? Will is asked himself—the sea was steeper and the swell now short and heavy rather than moderate. With each gust the ship lurched over to leeward—and each time it

seemed that she was never coming back. There was only one thing to do.

"Ballast!" he ordered, shouting to make himself heard above the screaming of the gale. "Put in . . . numbers two and three . . . double bottoms!"

"No!" bawled Darryl, his mouth an ugly hole in his fear-contorted face. "She's like a . . . bloody submarine ... already!"

"Put them . . . in! Or we . . . capsize!" "It's your . . . orders, Captain!"

"Yes. It's my . . . orders!"

"I . . . refuse. . . ."

But Taylor, the second mate, was already on the telephone to the engine room.

As the tanks filled the situation worsened, until Willis managed to turn the ship away from the wind, running free, his untidy apologies for sails goose-winged. He had been frightened, badly, by the free surface effect, knew that it had been the cause of the loss of more than one vessel. But with the ale astern she handled well, rolling easily. He kept her on this easterly course until the chief rang up to say that, according to the gauges, both tanks were now full. Willis brought her round then, slowly and carefully, until once again she was on an approximation to a port tack.

She was stable now, and the weight of the wind was no longer pushing her over. She was stable, but she was far too low in the water. The seas were breaking over her very superstructure, solid battering rams of water. Somehow the windows of the wheelhouse, to which the officers had retreated, were still holding. (The glass, of what Willis regarded still as his own time, would have shattered long since.) The funnel was gone, and nobody had seen it go. Miraculously the sails, together with their standing and running rigging, were surviving the beating they were taking.

Willis went to the telephone. "Chief," he said, "is there any way that you can pump diesel oil overside? On the weather side preferably?"

"Is there any way that you can stop water coming down the funnel? The engine room's damn nearly flooded!" "That's what I'm trying to do, Chief."

"I see. But we've not all that much left, Captain, and we must have fuel for the jenny. . . ."

"Lube oil, then. . . . It might be better. . . . Just a trickle from the weather discharges. No more than a trickle. . . ."

A good vegetable oil, such as linseed, would have been better still, best of all, but there was none in the ship.

Still, the lubricating oil was better than nothing. Finally the seas in Pulpster's immediate vicinity were no longer breaking, were subjugated by that thin, very thin glistening film, heaving sullenly under the liquid integument. She staggered ahead, sluggish, low in the water, far too low in the water—but, as a tanker, she was safer than a dry cargo carrier would have been in like circumstances. She was making headway, and apart from an occasional slop with no weight to it she was shipping no water, and although the sails were showing signs of wear and tear they were still holding.

She made headway, and toward midnight the wind moderated and the ballast tanks were pumped and the sails unbrailed.

For the rest of the voyage there was what Willis referred to as his "air umbrella." And then there was the tug, fussily efficient, which came roaring up over the horizon, whose skipper told Willis that he had been ordered to take Pulpster in tow. Willis replied that he was the only one who gave orders aboard his ship, and at last the tug went away.

And the wind backed, west to southwest, and finally to south, and as it came round so did Willis, keeping the ship on the port tack, bringing her back in toward the coast. With the shift of wind the sky cleared again and he was able to obtain good astronomical fixes. At last he raised Macquarie Light at its maximum range, allowing for his height of eye, of thirty miles.

He stood in confidently. He knew that he would make the Heads by daylight. The life raft transceiver had been repaired and he made contact with Harbor Control. He said, "My E.T.A. at the Heads is 0600 hours. I require tugs to assist me in berthing. I have no main engines. Please tell tugs to meet me off the Fairway Buoy."

"I have instructions for you, Captain, from your owners. The tug Kurraba will meet you off the

Fairway Buoy and take you to an anchorage on the bank. You are to remain there until you are in a fit state to come alongside. Shore labor will be sent out to you."

"In that case," said Willis, "please instruct Kurraba only to stand by me. I shall sail in to the anchorage." "Good on yer, mate," said Harbor Control. Darryl groaned.

"Our lords and masters," said Captain Dalby, the old marine superintendent, "are displeased with you. Very displeased, Captain."

"I did what I thought best, sir. After all, the cost of a deep sea tow—"

"—is not much compared with the loss of your ship's services for several days." The old man started to tick items off on his fingers. "Then there are two nylon dracones—ruined. Four mooring lines—likewise. And the damage done by your engineer in his mad search for metal fitting for your sails. Oh, yes. And your collision with that ferry in the West Channel."

"She shouldn't have come so close, sir. She could see that I was under sail."

"Nonetheless, you are far from popular—except with the press and the various newsreels. It is lucky for you that your fantastic voyage—one of them called it that—coincided with a shortage of important news."

"I was certainly surprised at the audience I had to watch me come in."

"Even so, I strongly advise you to write out your resignation."

Willis got to his feet. He felt sorry for himself—and sorrier for Jane. He had been given a chance—and because of his stubborn pride had muffed it. He would never be able to make a living in this brave, new, automated world in which ships were nothing but machines and their masters only drivers.

"Good-by," he said stiffly. "I'd better be getting along to the Employment Bureau."

"Not so fast, Captain Willis."

"Does the general manager want to fire me in person?"

Dalby smiled grimly. "He'd like to, but he daren't. There's been far too much press coverage. Romance isn't quite dead, you know." He looked at Willis over his steepled, bony fingers. "Don't you want to know about your next job?"

"Admiral, I suppose. At the main entrance to the Hilton-Australia."

Dalby laughed. "You'll still be `captain'—but your starting pay will be better than what you've been getting with us."

"Not the trans-Tasman hovercraft?"

"No. But the pay and conditions of chief seamanship instructor at the Captain Cook Nautical Academy aren't to be sneezed at. And—this will please you—there's talk of building a training schooner. . . ."

"Thank you," said Willis at last.

"Don't thank me," Dalby told him. "Thank yourself. And your luck."