

FORTRESS SHIP

by Fred Saberhagen

**Huge as an island, mighty as a squadron
of dreadnaughts, old as time, the ship
of the aliens was out to destroy them!**

The machine was a vast fortress, containing no life, set by its long-dead masters to destroy anything that lived. It and a hundred like it were the inheritance of Earth from some war fought between unknown interstellar empires, in some time that could hardly be connected with any Earthly calendar.

One such machine could hang over a planet colonized by men and in two days pound the surface into a lifeless cloud of dust and steam, a hundred miles deep. This particular machine had already done just that.

It used no predictable tactics in its dedicated, unconscious war against life. The ancient, unknown game-men had built it as a random factor, to be loosed in the enemy's territory to do what damage it might. Men thought its plan of battle was chosen by the random disintegrations

of atoms in a block of some long-lived isotope buried deep inside it, and so was not even in theory predictable by opposing brains, human or electronic.

Men called it a berserker.

Del Murray, sometime computer specialist, had called it other names than that; but right now he was too busy to waste breath, as he moved in staggering lunges around the little cabin of his one-man fighter, plugging in replacement units for equipment damaged by the last near-miss of a small berserker missile. An animal resembling a large dog with an ape's forelegs moved about the cabin too, carrying in its nearly human hands a supply of emergency sealing patches. The cabin air was full of haze. Wherever movement of the haze showed a leak

to an unpressurized part of the hull, the dog-ape moved to skillfully apply a patch.

"Hello, Foxglove!" the man shouted, hoping his radio was again in working order.

"Hello, Murray, this is Foxglove," said a sudden loud voice in the cabin. "How far did you get?"

Del was too weary to show much relief that his communications were open again. "I'll let you know in a minute. At least it's stopped shooting at me for a while. Move, Newton." The alien animal, pet and ally, called an *aiyan*, moved away from the man's feet and kept single-mindedly looking for leaks.

After another minute's work Del could strap his body into the deep-cushioned command chair again, with something like an operational panel before him. That last near-miss had sprayed the whole cabin with fine penetrating splinters. It was remarkable that man and *aiyan* had come through unwounded.

His radar working again, Del could say: "I'm about ninety miles out from it, Foxglove. On the opposite side from you." His present position was what he had been trying to achieve since the battle had begun.

The two Earth ships and the berserker were half a light year from the nearest sun. The berserker could not leap out of normal space, toward the defenseless colonies on the planets of that sun, while the two ships stayed close to it. There were only two men aboard Foxglove. Though they had more machinery working

for them than did Del, both manned ships were mites compared to their opponent.

If a berserker machine like this one, not much smaller in cross-section than New Jersey, had drifted in a century earlier and found men crowded on one planet, there could have been no real struggle and no human survivors. Now, though the impersonal enemy swarmed through the galaxy, men could rise up in a cloud to meet them.

Del's radar showed him an ancient ruin of metal, spread out for a hundred miles before him. Men had blown holes in it the size of Manhattan Island, and melted puddles of slag as big as lakes upon its surface.

But the berserker's power was still enormous. So far no man had fought it and survived. Now, it could squash Del's little ship like a mosquito; it was wasting its unpredictable subtlety on him. Yet there was a special taste of terror in the very indifference of it. Men could never frighten this enemy, as it frightened them.

Earthmen's tactics, worked out from bitter experience against other berserkers, called for a simultaneous attack by three ships. Foxglove and Murray made two. A third was supposedly on the way, but still about eight hours distant, moving at C-plus velocity, outside of normal space and so out of communication with the others. Until it arrived, Foxglove and Murray must hold the berserker at bay, while it brooded unguessable schemes.

It might attack either ship at any

moment, or it might seek to disengage. It might wait hours for them to make the first move—though it would certainly fight if the men attacked it. It had learned the language of Earth—it might try to talk with them. But always, ultimately, it would seek to destroy them and every other living thing it met. That was the basic command given it by the ancient warlords.

A thousand years ago, it would have easily swept ships of the type that now opposed it from its path, whether they carried fusion missiles or not. Now, it was no doubt in some electrical way conscious of its own weakening by accumulated damage. And perhaps in long centuries of fighting its way across the galaxy it had learned to be wary.

Now, quite suddenly, Del's detectors showed forcefields forming in behind his ship. Like the encircling arms of a great bear they blocked his path away from the enemy. He waited for some deadly blow, with his hand trembling over the red button that would salvo his atomic missiles at the berserker—but if he attacked alone, or even with Foxglove, the infernal machine would parry their missiles, crush their ships and go on to destroy another helpless planet. Three ships were needed to attack. The red firing button was now only a last desperate resort.

Del was reporting the forcefields to Foxglove when he felt the first hint in his mind of another attack. "Newton!" he called sharply, leav-

ing the mike to Foxglove open. They would hear and understand what was going to happen.

The *aiyan* bounded instantly from its combat couch to stand before Del as if hypnotized, all attention riveted on the man. Del sometimes bragged: "Show Newton a drawing of different colored lights, convince him it represents a particular control panel, and he'll push buttons or whatever you tell him, until the real panel matches the drawing."

But no *aiyan* had the human ability to learn and to create on an abstract level; which was why Del was now going to put Newton in command of his ship.

He switched off the ship's computers—they were going to be as useless as his own brain, under the attack he felt gathering—and said to Newton: "Situation Zombie."

The animal responded instantly as it had been trained, seizing Del's hands with firm insistence, and dragging them one at a time down beside the command chair to where the fetters had been installed.

Hard experience had taught men something about the berserkers' mind weapon, although its principles of operation were still unknown. It was slow in its onslaught, and its effects could not be steadily maintained for more than about two hours, after which a berserker was evidently forced to turn it off for an equal time. But while in effect, it robbed any human or electronic brain of the ability to plan or to predict—and left it unconscious of its own incapacity.

It seemed to Del that all this had happened before, maybe more than once. Newton, that funny fellow, had gone too far with his pranks; he had abandoned the little boxes of colored beads that were his favorite toys, and was moving the controls around at the lighted panel. Unwilling to share the fun with Del, he had tied the man to his chair somehow. Such behavior was really intolerable, especially when there was supposed to be a battle in progress. Del tried to pull his hands free, and called to Newton.

Newton whined earnestly and stayed at the panel.

"Newt, you dog. Come, lemme loose. I know what I have to say: Four score and seven . . . hey, Newt, where're your toys? Lemme see your pretty beads." There were hundreds of tiny boxes of the varicolored beads, leftover trade goods that Newton loved to sort out and handle. Del peered around the cabin, chuckling a little at his own cleverness. He would get Newton distracted by the beads, and then . . . the vague idea faded into other crackbrained grotesqueries.

Newton whined now and then but stayed at the panel moving controls in the long sequence he had been taught, taking the ship through the feinting, evasive maneuvers that might fool a berserker into thinking that it was still competently manned. Newton never put a hand near the big red button. Only if he felt deadly pain himself, or found a dead man in Del's chair, would he reach for that.

"Ah, roger, Murray," said the radio from time to time, as if acknowledging a message. Sometimes Foxglove added a few words or numbers that might have meant something. Del wondered what the talking was about.

At last he understood that Foxglove was trying to help maintain the illusion that there was still a competent brain in charge of Del's ship. The fear-reaction came when he began to realize that he had once again lived through the effect of the mind-weapon. The brooding berserker, half genius, half idiot, had borne to press the attack when success would have been certain. Perhaps deceived, perhaps following the strategy that avoided predictability at almost any cost.

"Newton." The animal turned, hearing a change in his voice. Now Del could say the words that would tell Newton it was safe to set his master free, a sequence too long for anyone under the mindweapon to recite.

"—shall not perish from the Earth," he finished. With a yelp of joy Newton pulled the fetters from Del's hands. Del turned instantly to the radio.

"Effect has evidently been turned off. Foxglove," said Del's voice through the speaker in the cabin of the larger ship.

The Commander let out a sigh. "He's back in control!"

The Second Officer—there was no Third—said: "That means we've got some kind of fighting chance,

for the next two hours. I say let's attack now!"

The Commander shook his head, slowly but without hesitation. "With two ships, we don't have any real chance. Less than four hours until Gizmo gets here. We have to stall until then, if we want to win."

"It'll attack the next time it gets Del's mind scrambled! I don't think we fooled it for a minute . . . we're out of range of the mindbeam here, but Del can't withdraw now. And we can't expect that *aiyan* to fight his ship for him. We'll really have no chance, with Del gone."

The Commander's eyes moved ceaselessly over his panel. "We'll wait. We can't be sure it'll attack within—"

The berserker spoke suddenly, its radioed voice plain in the cabins of both ships: "I have a proposition for you, little ship." Its voice had a cracking, adolescent quality, because it strung together words and syllables recorded from the voice of human prisoners of both sexes and different ages, from whom it had learned the language. There was no reason to think they had been kept alive after that.

"Well?" Del's voice sounded tough and capable by comparison.

"I have invented a game which we will play," it said. "If you play well enough, I will not kill you right away."

"Now I've heard everything," murmured the Second Officer.

After three thoughtful seconds the Commander slammed a fist on the arm of his chair. "It means to test

his learning ability, to run a continuous check on his brain while it turns up the power of the mindbeam and tries different modulations. If it can make sure the mindbeam is working, it'll attack instantly. I'll bet my life on it. That's the game it's playing this time."

"I will think over your proposition," said Del's voice coolly.

"Very well," answered the berserker.

The Commander said: "It's in no hurry to start. It won't be able to turn on the mindbeam again for almost two hours."

"But we need another two hours beyond that."

Del's voice said: "Describe the game you want to play."

"It is a simplified version of the human game called checkers."

The Commander and the Second looked at each other, neither able to imagine Newton able to play checkers. Nor could they doubt that Newton's failure would kill them within a few hours, and leave another planet open to destruction.

After a minute's silence, Del's voice asked: "What'll we use for a board?"

"We will radio our moves to one another," said the berserker equably. It went on to describe a checkers-like game, played on a smaller board with less than the normal number of pieces. There was nothing very profound about it; but of course playing would seem to require a functional brain, human or electronic, able to plan and to predict.

"If I agree to play," said Del

slowly, "how'll we decide who gets to move first?"

"He's trying to stall," said the Commander, gnawing a thumbnail. "We won't be able to offer any advice, with that thing listening. Oh, stay sharp, Del boy!"

"To simplify matters," said the berserker. "I will move first in every game."

Del could look forward to another hour free of the mind-weapon when he finished rigging the checker board. When the pegged pieces were moved, appropriate signals would be radioed to the berserker; lighted squares on the board would show him where its pieces were moved. If it spoke to him while the mindweapon was on, Del's voice would answer from a tape, which he had stocked with vaguely aggressive phrases, such as: "Get on with the game," or "Do you want to give up now?"

He hadn't told the enemy how far along he was with his preparations because he was still busy with something the enemy must not know—the system that was going to enable Newton to play a game of simplified checkers.

Del gave a soundless little laugh as he worked, and glanced over to where Newton was lounging on his couch, clutching toys in his hands as if he drew some comfort from them. This scheme was going to push the *aiyan* near the limit of his ability, but Del saw no reason why it should fail.

Del had completely analyzed the

miniature checker-game, and diagrammed every position that Newton could possibly face—playing only even-numbered moves, thank the random berserker for that specification!—on small cards. Del had discarded some lines of play that would lead from some poor early moves by Newton, further simplifying his job. Now, on a card showing each possible remaining position, Del indicated the best possible move with a drawn-in arrow. Now he could quickly teach Newton to play the game by looking at the appropriate card and making the move shown by the arrow. The system was not perfect, but—

"Oh, oh," said Del, as his hands stopped working and he stared into space. Newton whined at the tone in his voice.

Once Dal had sat at one board in a simultaneous chess exhibition, one of sixty players opposing the world champion, Blankenship. Del had held his own into the middle game. Then, when the great man paused again opposite his board, Del had shoved a pawn forward, thinking he had reached an unsailable position and could begin a counterattack. Blankenship had moved a rook to an innocent-looking square and strolled on to the next board—and then Del had seen the checkmate coming at him, four moves away but one move too late for him to do anything about it.

The Commander suddenly said a foul phrase in a loud distinct voice. Such conduct was extremely

rare, and the Second Officer looked around in surprise. "What?"

"I think we've had it." The Commander paused. "I hoped that Murray could set up some kind of system over there, so that Newton could play the game—or appear to be playing it. But it won't work. Whatever system Newton plays by rote will always have him thinking the same move in the same position. It may be a perfect system—but a man doesn't play any game that way, damn it. He makes mistakes, he changes strategy. Even in a game this simple there'll be room for that. Most of all, a man *learns* a game as he plays it. He gets better as he goes along. That's what'll give Newton away, and that's what our bandit wants. It's probably heard about *aiyans*. Now as soon as it can be sure it's facing a dumb animal over there, and not a man or computer."

After a little while the Second Officer said: "I'm getting signals of their moves. They've begun play. Maybe we should've rigged up a board so we could follow along with the game."

"We better just be ready to go at it when the time comes." The Commander looked hopelessly at his salvo button, and then at the clock that showed two hours must pass before Gizmo could reasonably be hoped for.

Soon the Second Officer said: "That seems to be the end of the first game; Del lost it, if I'm reading their scoreboard signal right." He paused. "Sir, here's that signal we picked up the last time it turned

the mindbeam on. Del must be starting to get it again."

There was nothing for the Commander to say. The two men waited silently for the enemy's attack, hoping only that they could damage it in the seconds before it would overwhelm them and kill them.

"He's playing the second game," said the Second Officer, puzzled. "And I just heard him say 'Let's get on with it.'"

"His voice could be recorded. He must have made some plan of play for Newton to follow; but it won't fool the berserker for long. It can't."

Time crept unmeasurably past them.

The Second said: "He's lost the first four games. But he's *not* making the same moves every time. I wish we'd made a board . . . "

"Shut up about the board! We'd be watching it instead of the panel. Now stay alert, Mister."

After what seemed a long time, the Second said: "Well, I'll be!" "What?"

"Our side got a draw in that game."

"Then the beam can't be on him. Are you sure . . . "

"It is! Look, here, the same indication we got last time. It's been on him the better part of an hour now, and getting stronger."

The Commander stared in disbelief; but he knew and trusted his Second's ability. And the panel indications were convincing. He said: "Then someone—or something—with no functioning mind is learning how to play a game, over there."

Ha, ha," he added, as if trying to remember how to laugh.

The berserker won another game. Another draw. Another win for the enemy. Then three drawn games in a row.

Once the Second Officer heard Del's voice ask coolly: "Do you want to give up now?" On the next move he lost another game. But the following game ended in another draw. Del was plainly taking more time than his opponent to move, but not enough to make the enemy impatient.

"It's trying different modulations on the mindbeam," said the Second. "And it's got the power turned way up."

"Yeah," said the Commander. Several times he had almost tried to radio Del, to say something that might keep the man's spirits up—and also to relieve his own feverish inactivity, and try to find out what could possibly be happening now. But he could not take the chance. Any interference might upset the miracle.

He could not believe the inexplicable success could last, even when the checker match turned gradually into an endless succession of drawn games between two perfect players. Hours ago the Commander had said good-by to life and hope, and he still waited for the fatal moment.

And he waited.

"—not perish from the Earth!" said Del Murray, and Newton's

eager hands flew to loose his right arm from its shackle.

A game, unfinished on the little board before him, had been abandoned seconds earlier. The mind-beam had been turned off at the same time, when Gizmo had burst into normal space right in position and only five minutes late; and the berserker had been forced to turn all its energies to meet the immediate all-out attack of Gizmo and Foxglove.

Del saw his computers, recovering from the effect of the beam, lock his aiming screen onto the berserker's scarred and bulging midsection, as he shot his right arm forward, scattering pieces from the game board.

"Checkmate!" he roared out hoarsely, and brought his fist down on the big red button.

"I'm glad it didn't want to play chess," Del said later, talking to Commander in Foxglove's cabin. "I could never have rigged that up."

The ports were cleared now, and the men could look out at the cloud of expanding gas, still faintly luminous, that had been a berserker; metal fire-purged of the legacy of ancient evil.

But the Commander was watching Del. "You got Newt to play by following diagrams, I see that. But how could he *learn* the game?"

Del grinned. "He couldn't. But his toys could. Now wait before you slug me." He called the *aiyan* to him and took a small box from the animal's hand. The box rattled faintly

as he held it up. On the cover was pasted a diagram of one possible position in the simplified checker game, with a different-colored arrow indicating each possible move of Del's pieces."

"It took a couple hundred of these boxes," said Del. "This one was in the group that Newt examined for the fourth move. When he found a box with a diagram matching the position on the board, he picked the box up, pulled out one of these beads from inside, without looking —that was the hardest part to teach him in a hurry, by the way," said Del, demonstrating. "Ah, this one's blue. That means, make the move indicated on the corner by a blue arrow. Now the orange arrow leads to a poor position. See?" Del shook all the beads out of the box into his hand. "No orange beads left; there were six of each color when we started. But every time Newton drew a bead, he had orders to leave it out of the box until the game was over. Then, if the scoreboard indicated a loss for our side, he went back and threw away all the beads he had used. All the bad moves were gradually eliminated. In a few hours, Newt and his boxes learned to play the game perfectly."

"Well," said the Commander. He thought for a moment, then reached down to scratch Newton behind the ears. "I never would have come up with that idea."

"I should have thought of it sooner. The basic idea's a couple of centuries old. And computers are supposed to be my business."

"This could be a big thing," said the commander. "I mean your basic idea might be useful to any task force that has to face a berserker's mindbeam."

"Yeah." Del grew reflective. "Also . . ."

"What?"

"I was thinking of a guy I met once. Named Blankenship. I wonder if I could rig something up . . ."

END

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