

- Lebedev, V. (1990). *Diary of a cosmonaut: 211 days in space*. New York: Bantam Books.
- Orberg, J.E. (1981). *Red star in orbit*. New York, Random House.
- Parker, J.F. & West, V.R. (Eds.) (1973). *Bioastronautics data book*. Washington, D.C.: NASA.
- Raised Salyut orbit may signal new visit (1971). *Aviation Week & Space Technology*, July 12, 16-17.
- Riabchikov, E. (1971). *Russians in space*. New York: Doubleday.
- Ryumin, V. (1980). *175 days in space: a Russian cosmonaut's private diary*.
- Salyut flight stresses biomedical studies (1971). *Aviation Week & Space Technology*, June 21, 17-19.
- Salyut mission starts research on astrophysics (1971). *Aviation Week & Space Technology*, June 28, 22-23.
- Salyut orbital altitude drops (1971). *Aviation Week & Space Technology*, August 2, 16.
- Soviet control room shows tracking net (1971). *Aviation Week & Space Technology*, January 6, 15.

RENTAL CAR

Pilot Dan Bowman, United States Army Air Corps, snuffed out his cigarette in the ashtray on the table and grabbed his flight gear as he ran out the front door of the quonset hut. Thirty-five Japanese planes had been picked up on radar only moments before. They were headed directly for the airfield.

Bowman estimated his distance from the row of parkedAAF fighter planes to be about 300 yards. The air raid siren and impending attack caught him somewhat off guard. He usually tried to stay closer to the ready-room and runway, but today he was off talking with a friend at the supply depot. It was 11 o'clock in the morning, an odd time to come under fire.

The radar system gave the pilots a few minutes advance warning. It was imperative that they get the planes off the ground and into the air. The AAF fighter planes would be easy targets for the Japanese bombs and bullets if they were sitting on the ground when they arrived.

Bowman broke into a run headed straight for the small grouping of P-47 Thunderbolts which he could barely see through the stand of palm trees ahead. The ground was hard and white and flat, and he zigzagged between the tree trunks as he ran. The humid midday heat had already settled down on the small Pacific island. The shadows from the palm fronds overhead didn't seem to help at all. It was oppressively hot, and Bowman was building up a serious sweat as he reached the halfway point to the airfield. Only a hundred or so yards left to go.

Some pilots had already arrived at the planes nearest the ready-room where the crew usually hung out. Support teams were making quick exterior checks of equipment. The first engine fired up in the distance. Everyone always wanted to be the first into the air. No one wanted to be the last.

Bowman broke from the last few trees at the edge of the runway and into the open. More than half of the planes were already manned. There, 50 yards away, was an unattended P-47. He had flown this one many times before. Another pilot ten yards ahead and to the side ran to the plane and pulled the chocks from the wheels. Bowman stopped and looked around again. Another plane would have to be found. He was not in the mood to play musical chairs.

But the base had exactly the same number of pilots on hand as aircraft. There *had* to be one P-47 without a pilot. All he had to do was find it. *There* she was at the far end. It was the new craft that had been delivered only two days before. And no other pilots were running toward her!

Bowman's feet slid on the sprinkling of loose sand as he dashed under the wing and pulled out the wheel chocks. He kicked them aside and hurriedly pulled himself up and onto the top of the left wing. The sliding canopy was ajar about an inch. Bowman slid it back and dropped quickly into the seat of the

sparkling new plane.

Something was not right. Something *really* was not right. Jesus! The whole cockpit was different! It *couldn't* be all that dissimilar from the earlier models. All he needed to do was catch his breath and sort things out. Yes, that was it. He buried his head down in the cockpit and scanned the instruments. "Let's see," he mumbled hurriedly. "There's the altimeter. No.....wait....ah....it's the manifold pressure gage. What the... Oh, there's the altimeter. Fuel....fuel....where's the fuel? Damn it. This is insane."

Bowman heard the roar of the powerful engines around him and felt the prop wash of all of the AAC fighters moving off down the field to get into the air. His shoulders were hunched forward, his eyes glued to the unfamiliar control panel. He couldn't think. It was just too much to fathom. He cocked his head up and looked out through the open canopy. "Oh my God - - everybody's underway." The last few planes were starting their roll down the airstrip. Others were already climbing to altitude to meet the oncoming band of Japanese attackers.

"Start the damn thing. Just get it started," he screamed to no one but himself. "Ignition switch....ah....ah no! It can't be. Ah, here it is. Let's see.."

The first bomb fell from the sky and landed near the operations building not more than 100 yards to Bowman's left. He ducked reflexively and looked up out of the cockpit again. Nothing from the explosion hit the plane. Bowman was in one hell of a mess, nothing but a sitting duck with his wings clipped.

His frantic attempts to identify the controls finally paid off. The big and burley Pratt & Whitney engine sprang to life, but Bowman didn't pause to congratulate himself. Up ahead, at the other end of the airstrip, was an approaching plane. It looked like a Mitsubishi Zeke fighter-bomber. Under normal circumstances the Zeke would be no match for him and a tough-

as-nails P-47 Thunderbolt. But at this particular moment he was at an obvious disadvantage.

Bowman looked up at the approaching Zeke, back down at the control panel, and back up at the Zeke. It was hopeless. There was no way in the world that he was going to get this thing up in the air and survive the aerial attack.

The staccato bursts of cannon fire came as no surprise, but the multiple impacts from the Zeke's 20 mm cannon slamming into the runway were downright terrifying. He had to act *now*. Bowman grabbed the hand throttle. At least it was right where God intended it to be! He pushed it forward and stomped down on the left rudder pedal. The 2000 horsepower engine roared and the P-47 Thunderbolt swung her tail around counterclockwise. Bowman evened out the rudder pedals and scooted off to the side of the airstrip just as the Zeke thundered by, not more than 50 feet overhead, her guns still ablaze.

That was it! He had to keep the ship moving. There was no way that he could get her up in the air in conditions like this. But he sure as hell could run her on the ground!

The same Zeke would probably be back for another pass, this time from behind him, perpendicular to the airstrip. Bowman hit the left rudder pedal again and swung the 10,000-pound ship back around 180 degrees. She darted across the runway and slowed near the edge of the palm tree grove. The Zeke roared directly overhead above the tops of the palm trees, its pilot unable to locate his handicapped target.

For the next ten minutes Dan Bowman raced his plane up, down, across, and around the airstrip on that remote island in the Pacific. He was a tempting target, and the Japanese fighter-bombers made countless strafing attacks. But the American pilot was able to dodge all of the bombs and all of the bullets. Their ammunition low and their fuel tanks running dry, the enemy

planes headed back out to sea and their own base.



Dan Bowman eventually learned to fly his new P-47 Thunderbolt and confess his story to aviation researchers after the end of World War II in August of 1945. But he never did figure out why someone would redesign a fighter plane's instrument panel in the middle of a war.

REFERENCES AND NOTES

Craven, W. F. and Cate, J. E. (1955). *The Army Air Forces in World War II: Volume Six, Men and planes*. Washington, D.C.: Office of Air Force History.

Fitts, P. M. and Jones, R. E. (1947). *Psychological aspects of instrument display: Analysis of 270 "pilot-error" experiences in reading and interpreting aircraft instruments*. U.S. Air Force Air Material Command, Wright-Patterson Air Force Base, Dayton, Ohio, Aero Medical Laboratory, Engineering Division.

Gurney, G. (1962). *The war in the air*. New York: Crown Publishers, Inc.

This story is based on a 1947 interview with an anonymous fighter pilot who served in the Pacific during World War II (see Fitts and Jones, 1947).