

Chapter 21
Zero
24 December 1941

Within a very short and intense period of time, the American Airlines pilots had been transformed into combat cargo pilots. They learned to go against many of their stateside instincts. They penetrated thunderstorms now to hide from fighters instead of skirting them, having learned that the best place to transit storms was in the upper third of the cloud formation. Besides, the hammering they took was no different than a normal crossing of the Hump; the advantage of invisibility from Zeros made it worth the ride. They learned to plant their landings without bouncing or being embarrassed. Mostly, they learned to push their DC-3's to their performance limits—and beyond.

The veterans quickly reverted to their roots. It had not taken them long to get their edge back, once the daily grind of combat operations began. They fell back on the habits and procedures that had seen them through the last war.

It was Christmas Eve, and the day could not have been clearer—not a cloud in the sky, no place to hide. Thumper nervously scanned the sky behind and above his DC-3. Man-child, in his right seat, seemed oblivious to Thumper's anxiety. Instead, he was enjoying the trip. A beautiful and unusually smooth day, even the Hump had spared them the normal, bone-jarring ride. Now, on their return leg, he hoped the smooth weather would hold.

He didn't even comment on the occasional turns Thumper made to the left, craning around to scan behind the lumbering DC-3, then returning to course without a word. Something had the hair up on Thumper's neck. Man-child had gotten used to the twitchiness of the vets. He figured, what the heck—it kept them alive in the last war; who was he to question their nerves? Besides, he had read a report from Intel saying the Zeros wouldn't come up this far north.

Thumper started another turn to the left, leaning way forward over the yoke and scanning the sky aft and above his ship. Suddenly, he saw what he had been looking for: a glint of sunlight off a wing, as the hunter performed a low reversal turn to align fuselages for a high-deflection gunshot.

Even before Thumper's brain could fully process the information, his muscle memory reacted instantaneously, instinctively, in full survival mode. He simultaneously snapped on full left aileron and full left rudder, while pulling the yoke into his lap. As he manipulated the flight controls with his left hand, his right jammed on emergency full power. The empty DC-3 reacted surprisingly, even violently. Man-child banged his head on the right windscreen frame. The chief, who was acting as crewman, went flying across the empty cargo bay, bouncing off the right bulkhead before being pinned to the floor by the high G-force.

Thumper never took his eyes off the glint, watching it transform from a black dot into a Mitsubishi model A6M2 Zero-Sen. Just as Thumper got the full four G's that he wanted on the DC-3, the Zero's wings began to sparkle with gunfire. The 20-millimeter cannons and 7.7-millimeter machine guns were throwing a combined eighteen hundred rounds per minute—thirty rounds per second—at the maneuvering DC-3. From a past life's experience, an

experience he once thought he would never call upon again, Thumper knew the rounds would fall behind him.

The Zero did not have enough lead pursuit. His nose wasn't far enough in front of the DC-3's. Thumper could see the tracers arc away from him because of the G-force. The Zero pilot had not anticipated a fighter-type break turn from a DC-3. Because of the abrupt move from the DC-3, he couldn't get his nose out in front of it in time to score any hits. Under high G, bullets made a curving arc falling away from the direction of the pull, much like water from a hose.

Had his attack been unobserved, the Japanese pilot could have bore-sighted the DC-3 and blown it from the sky. But Thumper had refused to cooperate, keeping the four-G pull on. His nose was now passing through forty-five degrees, nose low; he was rolled, almost inverted. His plan was to complete an oblique turn, a modified split S, pulling for a valley below and slightly offset to the south. As he buried the DC-3's nose toward Mother Earth, Thumper pulled the power to idle. He didn't need to look inside at the instruments to know that his DC-3 was at the redline speed. He scanned alternately between the valley and the Zero—and then pulled directly at the fighter. The young Zero pilot matched the DC-3's move, rolled inverted and pulled six G's to regain a firing solution. When he rolled inverted and pulled, his canopy and windscreen filled with the mountains, valley and ground below. Startled, he subconsciously eased his turn, not wanting to bury his nose and hit the ground, and overshot the flight path of Thumper's DC-3.

The fighter pilot rolled back upright, pulling off target to get his situational awareness back. He realized the valley floor was thousands of feet deep. He had been duped by the fleeing DC-3 pilot. Infuriated, he rolled back inverted, went to combat power and executed a six-G split S in pursuit of the DC-3. Had the transport been a fighter, he would have lost it easily in the ground clutter. The large DC-3, however, was easy to spot as it completed its oblique turn, running for the valley floor.

The Zero pilot knew that even with the head start it had, he would quickly run the DC-3 down. He would relish this kill; his honor would be restored. Coming through the bottom of his split S, he pulled until he was pointed directly at the lumbering DC-3. After pulling straight toward the earth at full power, his acceleration was dramatic. Pulling through the bottom of his maneuver, he was now at thirty degrees nose low, chasing the transport down the valley at three hundred knots. Now with his nose on the target, he could see it through his gunsight. With his sighting rings, he could measure the distance: it was almost four thousand feet away.

Easing forward on the stick, the Zero pilot put his fighter in a zero-G dive. With no positive or negative G on the airframe, it produced no lift and thus no induced drag. Gravity, aided by the 925 horsepower of the Nakajima Sakae engine, turned it into a rocket. He intentionally over-spiced his aircraft, exceeding his redline by fifty knots—now at 350, he ran Thumper down quickly.

Thumper's plan had been to run down the valley and hope that either a) the Zero wouldn't follow him into the weeds, or b) it would lose sight and thus couldn't follow him. Neither, he knew, was likely to happen.

After getting his head banged on the windscreen frame, then pushed down to his right knee by the G-force, Man-child was regaining his personal bearings. He looked around, trying to figure out how they had wound up in a valley, going the opposite direction.

“What the heck is going on, Thumper?”

Before he could get an answer, the chief burst into the cockpit.

“Where's the Zero?”

“What Zero?” shouted Man-child.

Both the chief and Thumper ignored him.

“Did you lose him, Thumper?” asked the chief.

“I don't know. Get up in the celestial window and check our six, left side high.”

“Roger that, Thumper.” The chief seemed to levitate into the celestial window just aft of the cockpit. Within four seconds he was back in the cockpit.

“He's coming, seven o' clock high, doing the speed of heat!”

“Shit, hang on!” Thumper pulled the throttles to idle and put the aircraft into a violent slip, by full-deflecting right aileron and full left rudder.

By cross-controlling the aircraft, the attitude remained static, wings level. However, all of the flight controls in the windstream acted as speed-brakes. Cross-controlled and at idle power, the DC-3 slowed as dramatically as the Zero accelerated.

“Get back up there,” Thumper told the chief, “and yell when he shoots.”

“Eye, eye, Thumper.”

Man-child couldn't take it anymore.

“Why are we slowing? Let's run like hell!”

Thumper leaned far to his left.

“He's a hundred knots faster than us; we'd never get away. I'm going to make him come down and fight *my* fight.”

Chief had barely gotten into position when the Zero, now at fifteen hundred feet, started firing. He ducked and yelled to the cockpit:

“Incoming!”

Thumper held the slip and unloaded the airplane, pushing to negative G.

The Zero pilot had decided to make a long, slashing attack, then come off target by pitching up and left to a high perch, and re-attack if necessary. He had just pulled the trigger on his two 20-millimeter cannon and 7.7-millimeter machine guns, when the DC-3 disappeared below his nose. He pushed to reacquire his target, but had to release the trigger. Negative G's would jam his guns.

It was then that he noticed the unbalanced flight of the DC-3—a slip! His closure was not the hundred knots he expected; it was two hundred. As he blew past the DC-3, he chopped his power to idle. Enraged, he pulled off, pitching to a high perch left of and a thousand feet higher than the DC-3. Bending his Zero to its perch, the Japanese pilot roughly cross-controlled in an attempt to slow it down. He had lost his composure, driven now by pure blood lust; all he wanted was the

kill. He slid slightly forward of the DC-3. Instead of steadying his aircraft and methodically maneuvering into a firing position, he immediately re-attacked.

The Zero was much harder to slow than the DC-3; it was still doing 225 knots on its high perch. Thumper had slowed the DC-3 to 150 knots, close to best maneuver speed. The Zero pilot initiated a barrel-roll attack. He pulled the nose of his fighter thirty degrees straight up. Passing thirty degrees nose up, he started a slow roll to the right while still pulling up. His nose reached an angle of forty-five degrees high, as he slowly rolled inverted. At the halfway point, he was perfectly inverted and let his nose fall through the horizon, pointing directly at the DC-3. Their courses were ninety degrees offset so that the DC-3 moved down the valley while the Zero continued the slow right roll in the opposite direction, continuing to descend.

The maneuver gave the fighter pilot the separation he needed. As he completed the roll, he ended up slightly aft and below the DC-3, in a perfect firing position. The move was quite spectacular. Thumper admired the precision as only a pilot could—and it was exactly what he expected. In fact, he had counted on it.

Now they were both low and slow: his fight. The wings of the Zero sparkled. Thumper anticipated the shot, released the slip, went to emergency power and pulled another four-G break turn to the left and into the Zero. Again, the tracers missed.

This time, the Zero stayed in the saddle; he pulled his throttle to idle and wrestled on five G's. The Zero was buffeting wildly, on the edge of stall. Thumper over-banked, still at four G's, fainting for the valley floor, which was closer than the Zero pilot realized. He bit, jerking his control stick left to head off his prey, pulling harder. He stepped on the bottom rudder to bring the gunsight piper back on the DC-3.

The high G, coupled with the low airspeed, combined to raise the angle of attack on the wing to a dangerous level. Angle of attack is simply the angle between the wing and the relative direction of the air flow. If the angle gets excessive, caused by the pilot pulling too hard, airflow over the wing becomes turbulent, causing buffet. If the pilot continues to pull, the flow will separate from the wing and it will stall, or stop producing lift, regardless of the speed of the aircraft. The result is a departure from controlled flight—most of the time, quite a violent ride.

Thumper knew the Zero pilot was pushing his aircraft to the edge of its performance envelope. He answered the Zero's move by rolling back, wings level, and pulling straight up. The young fighter pilot, while still in heavy pre-stall buffet, reversed the controls again aggressively to get the piper back on his target. The wings sparkled again with deadly fire from his weapons, but because of the unbalanced condition of his aircraft, the fire was poorly aimed and not concentrated.

The aircraft began to uncouple: as he started to roll right, the nose yawed left, causing the airflow to his left wing to be partially masked by the nose of the aircraft. As the airflow separated on the left wing, it stopped producing lift while the right wing was swept into the wind, so was still producing lift. The left wing had stopped flying while the right wing continued. The Zero shuddered. Then, even though the Zero Pilot was trying to turn right, the aircraft snap-rolled left and departed controlled flight in a classic, adverse yaw stall.

The Zero pilot panicked and exacerbated the critical situation by jamming on combat power. It was a fatal mistake. The torque caused by the engine power and propeller created more momentum as the aircraft actually rotated around the prop. The sum of these forces rolled the Zero left violently. The nose dropped below the horizon and, after its second snap roll to the left, it hit the valley floor, inverted and twenty degrees nose low. It exploded into a huge orange and black fireball.

Thumper rolled up on his left wing and watched the impact.

“Holy shit!” chirped out Man-child.

The chief poked his head into the cockpit just in time to see the fireball.

“That’s a kill,” he deadpanned.

Thumper nodded and added, “We got any holes back there, Chief?”

“Yeah, a couple, nothing vital.”

“Good,” said Thumper. “Let’s get the hell out of here. He might have a wingman.”

Man-child sat up straight.

“Wingman?” he said, his voice two octaves higher.

Thumper turned the DC-3 to the right and flew out of the valley. He set climb power and began the long climb to a crossing altitude. Man-child spent the rest of the trip looking over his shoulder, intently scanning behind them. There were no wingmen. The rest of the flight was uneventful.

After they landed, Man-child sprinted to the makeshift operations office. By the time Thumper and the chief walked in, Man-child was jabbering like a monkey, dog-fighting with his hands. The youngsters were gathered around, soaking in every word. Thumper sat down next to Charles Henry.

“Rough day, Thumper?”

“I’ve had better, Charles Henry.”

“Rock killed a Zero, eh?”

Thumper nodded slowly. “Damn lucky.”

Man-child heard the statement.

“Lucky? That was the best damn flying I’ve ever seen or heard of! I didn’t think a DC-3 could do that. How can you say that was luck?”

The room full of pilots was now looking at Thumper. He stood slowly, wearily, and counted off on his fingers.

“One,” he said, “we were lucky that we were empty. Two, we were lucky the valley was below us. Three, we were lucky he jumped us on the left side. Four, we were lucky he followed us down to the deck and fought our fight. Five, we were lucky he wasn’t as good as he thought he

was, and stalled that airplane. If any one of those things hadn't happened, we'd be the smoking hole, not him.”

Thumper started to head for the door but Trey stopped him.

“We are all just trying to learn, Thumper. Help us—tell us how you beat that Zero.”

Thumper stood with his arms crossed over his chest.

“Okay, sport.” He looked over and winked at Charles Henry. “Listen up, knuckleheads. First, I didn't defeat that Zero. I defeated his weapons, then the pilot.”

He got a look back from his young students that could be best described as the trout look: eyes wide open, mouths agape. Thumper couldn't help but laugh.

“Okay, boys, here's the deal: in a high-G turn, to shoot another airplane down, the shooter has to get his nose way out in front of the targets. Then he has to hold steady on the target and walk the bullets onto something critical on the aircraft or into the cockpit. It ain't easy. If the target starts wiggling, it is damn hard. Ninety percent of air-to-air kills are unobserved.”

“What does that mean?” Trey interrupted.

Charles Henry piped in from across the room.

“It means the target never saw the shooter—his first clue being rounds impacting all over the aircraft. Luck counts, but in combat you gotta make your own luck.”

Thumper went on.

“First, defeat the initial shot.” He demonstrated with his hands. “Move the airplane, don't be a compliant target. Pull right at him; force him to commit his nose for a shot. Then move again to get out of plain or phase. Get your nose low, to keep or get some energy by using gravity.”

Danny raised his hand as if in school.

“How did you keep from pulling the wings off?”

“The DC-3 is a utility class aircraft; that means it's stressed for three-and-a-half positive and one negative G's. I didn't pull more than four. Engineers always build in a little buffer, the fudge factor. The DC-3 is as strong as a horse, it is over-built. Remember: you have to be smooth and coordinated.”

“Even when you are being aggressive?” asked Trey.

“Especially when you are being aggressive, you have to be in coordinated flight.”

Man-child looked confused.

“What do you mean by coordinated?”

“You have to keep the tail behind the nose. That Jap got sloppy. He was more focused on killing us than flying his aircraft. He killed himself, I just talked him into it.”

Trey asked one last question.

“What did you mean when you said he wasn't as good as he thought he was?”

Thumper smiled.

“Trey, no pilot is as good as he thinks he is.”

The young copilots all looked to the floor, assuming he was talking about them individually.

“By the same token, no pilot is as bad as his buddies think he is, either.”

That brought a relieved laugh from the group.

“Look,” he continued, “you have to wander into the valley of the shadow of death thinking that you are the baddest S-O-B in the valley. But in the back of your mind, know—expect—that you will make at least one mistake every flight. Always be on guard for that mistake. When you recognize it, you can fix it.”

Thumper headed for the door again and this time, Charles Henry stopped him.

“Thumper, you are a double-pump today,” he said. “You take off in a half hour. Want me to take it?”

Thumper looked over at Man-child.

“No thanks, Charles Henry, the Man-child and I will take it. Come on, Junior. Let's get some chow.”

“Ho, Ho, Ho,” mumbled Man-child. “Merry Christmas.”

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