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“FREE FALL”: JULY 1959

William H. Rankin

from *The Man Who Rode the Thunder*

Lieutenant Colonel William H. Rankin (1920–2009) was a Marine pilot and veteran of both World War II and Korea when a Cold War accident literally catapulted him to fame. On July 26, 1959, the engine of his F-8U Crusader, a carrier-based jet fighter, suddenly stalled and the fire warning light on his instrument panel began flashing. Rankin triggered his ejection seat, which shot him through his plane’s cockpit canopy. He was flying at an altitude exceeding 45,000 feet, without a pressure suit—and he exited the plane at the top of a gigantic thunderstorm cloud mass. His harrowing experience riding the thunder down has few parallels; if it were fiction, it would be hard to believe.

I was not panicky. Mentally, I was fully prepared to eject. By training, by experience, by instinct, I knew exactly what to do and did it rapidly but deliberately.

I positioned myself in the seat, feet firmly on the deck, back erect, shoulders squared and tugged at my torso harness for reassurance. Then I reached up behind me, gripped the ejection seat handles and pulled hard. The curtain came down before my eyes; I expected to feel a tremendous blast of air as the canopy tore away. But I didn’t feel anything, nor did the curtain pause at the point where I’d have to reach back for the lever that would by-pass the canopy arming mechanism. With the curtain coming down smoothly, I was not going to stop. All I could think of in that brief moment was, “Oh, my God! Here I go through the canopy.” And then I simultaneously heard and felt the ejection seat fire, almost as though a huge bull elephant had kicked me in the rear and

made an explosive snort at the same time. It gave me a peculiar sense of relief because I knew I was going out. The ejection seat, at least, was not defective. As I shot up and out of the plane, I remembered a strange, ripping sensation, as if part of my body or flight suit had caught on a jagged edge of something solid and was being dragged through a row of sharp, uneven teeth. I wasn't sure whether this meant I was being shot through the unopened canopy, but later I discovered little stab wounds in my shoulders, indicating that I probably did go through the canopy.

As I rose from the shelter of the cockpit I hit a tremendous, wall-like blast of air, and the ejection curtain was ripped from my hands, the cable pulling the ejection seat away. My body was suddenly a freezing, expanding mass of pain. In that first moment alone in space I had the feeling that I had reached the end, that I would not survive.

My first shock was the incredibly cold air. I had gone abruptly from a comfortable cockpit temperature of 75° F. to almost *minus* 70° F., the sudden frigidity enormously compounded by the “chill factor”—cold plus the force of wind, precisely the difference between feeling cold winter air on your face when there's no wind, and feeling the same air when there's a tremendous wind. But up there the “wind” condition—my body shooting through the air at several hundred miles per hour—was unbelievably cold. I felt as though I were a chunk of beef being tossed into a cavernous deep freeze. Almost instantly all exposed parts of my body—around the face, neck, wrists, hands, and ankles—began to sting from the cold. It felt as if I were on fire. Then, seconds later, the burning sensation turned to a blessed numbness.

Meanwhile, the pain of “explosive” decompression was unbearable. I could feel my abdomen distending, stretching, stretching, stretching, until I thought it would burst. My eyes felt as though they were being ripped from their sockets, my head as if it were splitting into several parts, my ears bursting inside, and throughout my entire body there were severe cramps

At first, there was no sensation of falling, only of zooming through the air. I knew my dark tinted visor had blown away because as I spun through the air the brilliance of the sun came through the thin atmosphere in blinding white flashes. Then, as I apparently had fallen to the

level of the clouds' fleecy white tops, still spinning, everything about me seemed like a kaleidoscope of rotating brilliant colors. Against a purplish void, the sun went by in streaks of blurred reddish-orange, like an elongated fireball, between glimpses of undulating milky-white fields that were the cloud tops.

My first sensation of falling came just before I reached the thick layer of clouds. Then it seemed as if I had jumped from a high fence and a white wall was speeding toward me. Otherwise, I was not too conscious of falling.

I was preoccupied with the pain of decompression. It was nature's cruelest torture, the screw and rack of space, the body crusher, the body stretcher, each second another turn of the screw, another wrench of the rack, another interminable shot of pain. Once I caught a horrified glimpse of my stomach, swollen as though I were in well advanced pregnancy. I had never known such savage pain. I was convinced I would not survive; no human could.

But after perhaps no more than fifteen or twenty seconds had elapsed, just as I had begun to enter the soft white tops of the clouds, I was suddenly overwhelmed with a feeling of elation, gratitude. I was conscious; *in spite of everything I was conscious!*

Hang on, I thought. Hang on! You might make it yet. You're thinking. You're conscious. You know what's going on. Just ride out this free fall and you've got it made.

I became conscious of my body tumbling, spinning, and cartwheeling through space. I spun like a pinwheel, my limbs trying to go in every possible direction at once. I spun on the vertical, diagonal and horizontal axis. I felt the enormous pulling, stretching effects of g forces. I was a huge stiff blob of helplessness! I recognized that my body was literally spreadeagled and the force was so great I could not move my hands or legs. Several times I tried to bring my arms in to my body but it was like pulling on a stone wall. The effect of the g forces on my arms and legs must have been to multiply their weight many times.

But now I was desperate to get my arms in—something was beating against my face, relentlessly, painfully. It was my oxygen mask. *My oxygen mask! God, I had almost forgotten.* In spite of the painful pounding, I

was now strangely pleased, knowing that I had *not* lost my oxygen mask. It served to remind me that I was not getting oxygen. I had just left an airplane where I had been on 100 per cent oxygen and perhaps enough had remained in my blood to sustain me for awhile, but not for long. I'd need that oxygen soon to avoid almost certain unconsciousness, possibly serious brain damage. I knew also that I was free-falling and must continue the free fall until my 'chute would open automatically at 10,000 feet. But what if something went wrong and the 'chute did not open and I were unconscious at the moment, unable to pull the D-ring to save myself? *I must get that oxygen mask! It's still flapping wildly against my face. It might come off. Get it.*

I continued struggling, to pull in my hands, but to no avail. I was still a human centrifuge, and the strain on my arms seemed to increase until I felt as though my arms were being torn from their sockets. Now, no part of my body seemed free of pain; but merely thinking about it gave me a peculiar feeling of satisfaction because it reminded me that I was still conscious. Maintaining consciousness had now become my consuming desire. Repeatedly, I thought, *Keep it up. That's fine. Keep going. Fine, fine, fine. You're still conscious. It won't be long now. You'll be falling into denser air. More oxygen, less decompression, less pain. Keep going.*

Suddenly, as I entered what appeared to be a dense overcast of grey and white clouds, I was able to pull in my right hand, then my left hand. I was winning. I grabbed the oxygen mask with my right hand, held it to my face, and held the top of my helmet with my left hand. Meanwhile, the strain seemed to ease on my legs and they started flailing about, like rubber. But I didn't care. I was mainly concerned about keeping that oxygen mask on my face. I had held my helmet, although at the moment I was not concerned about losing it, because the strap had been straining so sharply, tightly against my neck it felt as if I were in a hangman's noose. Holding the helmet seemed to ease the strain.

In denser atmosphere, I was beginning to feel a little better, more confident, almost certain I'd survive. I was enormously pleased with myself for remaining conscious. I would be able to report in detail what had happened. It would be good news to high-altitude aviators: *We can*

survive effects of decompression at 47,000 feet, perhaps much higher, perhaps 50,000 feet. But I'll report only 47,000 feet because that was the last altimeter setting I had seen before ejecting. Yet I'm certain I was higher because after I had looked at the altimeter the plane continued climbing. Other instruments demanded my attention. I'm thankful I can remember them, the settings, the positions, the readings, the rapidly unwinding rpm, the oil pressure . . . the oil pressure? What WAS the oil pressure?

Paradoxically, for a few moments I seemed to forget about my falling, tumbling, twisting, my numbness, pain, and cold. I could not seem to picture the oil pressure gauge in my mind and it distressed me. It seemed to be the only instrument I could not remember. (Till this day, the oil pressure reading is the only thing I cannot recall. Psychiatrists tell me that years from now it may suddenly come back to me.) Abruptly, however, I stopped thinking about the instruments. I had suddenly, inexplicably felt a powerful urge to open my parachute.

I was still in a free fall. I knew I had to continue the free fall. But I just didn't seem to trust the idea of it; perhaps I had lost confidence in another automatic savior, the barometric sensing device that would respond to heavier air at 10,000 feet and open the 'chute for me. I don't remember why I felt as if I had to open the 'chute. I know only that it was an almost overwhelming temptation. I let go of my helmet and reached for the D-ring. But fortunately just as I started clawing at the D-ring, I realized it was the wrong thing to do. *That's a damned stupid thing to do*, I thought. *Do you want to freeze to death, going down slowly in an opened 'chute? And what about your oxygen? That emergency supply won't last more than five minutes, perhaps only three minutes. Just enough to get you through the free fall. Free fall, Bill, free fall. . . .*

I took my hand away from the D-ring and continued holding my helmet. *That's good. Keep your hands busy. Hold your oxygen mask, your helmet.* It was then I felt something streaming down my face, around my neck, and suddenly freezing. I took my right hand away from the mask for a moment and noticed that it was covered with blood. I wasn't quite certain where the blood had been coming from. Perhaps the pounding mask had broken my nose. Perhaps I was bleeding from the eyes and ears, as well as the nose. As I was to learn later, I did not have a broken

nose, but I had bled from the eyes, ears, nose and mouth as a result of ruptures caused by the “explosive” decompression.

Now, I was in heavier air and starting to feel more comfortable. But the overcast had become so dense that without reference to even a patch of sky, I had almost lost all sensation of movement. I felt as if I were suspended in a soft, milk-white substance and falling as though in some huge amorphous easy chair, my feet in the air. Only the sound of air rushing past me—and the flailing, loose oxygen hose—gave me a feeling of movement. The sight of the loose oxygen hose reminded me that earlier I had done something foolish.

After I had managed to get the oxygen mask to my face, I saw the loose hose, now below me, now above me, as I tumbled. I thought the hose connecting my mask to the emergency oxygen container had become disconnected, especially after I had caught a glimpse of the coupling. I struggled to grasp the hose and succeeded in doing so, only to realize that it was a different hose, the one that had been ripped away from the main oxygen supply in the airplane. I had been confused by the identical couplings. But in the process of reaching for the hose and then releasing it, I noticed my right glove ballooning from the force of air and felt, mistakenly, that the glove would only get in my way. I had already lost my left glove and forgot that my left hand had instantly frozen numb. I simply held my right hand out for a moment, and the force of air ripped it from my hand; not until I saw the glove sailing rapidly off into the murky overcast did I realize it was a stupid thing to do. Now my right hand would freeze—and it did, within seconds.

As I continued falling, I was amazed suddenly to realize how much thinking I had been able to do. With the effects of decompression diminishing, although the pain was still great throughout my body, I recognized that numbness had become an analgesic, helping me to tolerate the pain. But as the overcast grew darker, having lost reference even to the flailing oxygen hose, I felt as if I were in a complete void; I could no longer tell whether I was spinning, rolling, tumbling, or cart-wheeling; whether I was on my back, stomach or falling feet first. Again, I felt a strong urge to open my chute and it was at this moment I began to think of the passage of time.

I made several attempts to look at my watch. Although I could not be certain, it seemed to indicate four or five minutes after six P.M. In the overcast the luminous dial was barely visible. Then I started thinking about my rate of fall. Undoubtedly, I had slowed to terminal velocity downward, seconds after I had ejected, and was now falling at an average rate of about 10,000 feet per minute. But I was not exactly calculating with slide-rule precision. As a matter of fact, at one point I had confused the terminal velocity of my free falling body with the rate of descent of a jet, about 4,000 feet a minute, coming down through overcast for a landing; and the result shook me for a moment. *What the hell's going on here*, I thought. *Come on, boy, get hold of yourself. You're not a jet, you're a pilot, you're free falling. Get those rates squared away in your mind.*

But having made the rough, quick calculations with the proper rate of fall, the confidence I had built up in survival almost vanished. Since I had left my airplane at exactly six P.M. and at approximately 47,000 feet, and now it was several minutes past six, or so it seemed, why hadn't my 'chute opened? Had I sped past the 10,000-foot mark? In this overcast, unable to see anything, what if I were only several hundred feet from the ground and about to crash into it? I knew my 'chute had not opened because I had not felt the characteristic violent jerk.

Once more I felt a tremendous desire to open my 'chute. But now my trained instincts were in control. I could think more clearly. I knew my timing was not precise. I knew I should have more confidence in the automatic 'chute opener. I decided to wait a little longer, fifteen seconds, perhaps half a minute, maybe a minute. I would judge according to circumstances; and just then my confidence was somewhat restored by a feeling that my body had been struck by little rocks. I remembered the thunderstorm and realized that those "little rocks" were perhaps hail, drops of rain carried to the freezing level by the storm's updrafts, quickly frozen, then falling as hail. *The freezing level for rain? It must be at least 10,000 feet or more. Good. Keep free falling, keep going, keep conscious.*

I tried to see what was going on but I felt a peculiar sensation in my eyeballs, as though they were freezing. It was the same tingling sensation I had felt earlier just before the exposed parts of my body turned

numb. I closed my eyes and kept them closed, although it also occurred to me that perhaps it was the moisture of the clouds that was freezing in my eyes, not my eyes' fluids.

I started thinking about the 'chute again and came to the conclusion that perhaps it should have opened. I was certain that I was now in denser, more comfortable air. I was still quite cold but the little straining effects of gas seeking to escape from my body under continuing decompression seemed to disappear. I felt now the risk of crashing into the ground in an unopened 'chute was greater than the risk of freezing to death, or being for a while without oxygen. I reached for the D-ring and was about to pull it when suddenly my body lurched violently—my feet had gone through a floor in mid-air and wanted to keep going while the rest of my body could not. My 'chute had opened! Almost at the same time the oxygen mask collapsed against my face. *Uncanny, perfect timing*, I thought. The emergency supply of oxygen was designed to sustain me during a free fall, after which my 'chute would open at a level where I would no longer be concerned about oxygen and the supply would give out, and it did.

Still, I wanted to be certain about it. The violent opening of a 'chute was no novel experience to me. I remembered my bailout in Korea. But this had been a tremendous, far more violent sensation than anything I had felt before. I knew I had been falling at a rate in excess of 100 miles per hour and had suddenly decelerated to perhaps 10 miles per hour and at the moment of such a shocking deceleration I had felt greater violence—but I wanted to see the 'chute with my own eyes, and I could not. When I looked up it was much darker than I had anticipated. I could not see the beautiful, joyous, reassuring sight of the "silk." However, I could see, and feel, my parachute risers, taut, straight up. *The 'chute must have opened*, I thought. *There are the risers, nice and straight, straining against my body, on my torso harness*. But in the thick overcast, without references, I could not tell the position of my body, nor how fast I was falling. Suppose I had a streamer, a partially opened 'chute? Or suppose I had a damaged 'chute? A missing panel or two? Was I floating, or still rocketing toward earth? I reached up and felt the risers. They felt nice and firm. Good. I rocked the risers. Now I felt better. I

was confident I had a good 'chute. Rocking the risers did it; it was the same "feel" as when I had rocked the risers coming down in the 'chute in Korea.

Again, a rough calculation. I'm at the 10,000-foot level. Descending at the rate of about 1000 feet per minute, give or take a couple of hundred feet. I should be down in about ten minutes. That's great. All's well now. I've got a good 'chute. I'm comfortable. I'm conscious. I've survived.

I felt good, I felt wonderful. I was even buoyant, elated. Now I could relax a bit. I could take off the oxygen mask, and did. When the oxygen mask fell away, a small pool of blood spilled into my hand. Apparently, the violent opening of the 'chute had started my nosebleed again. At the same time, I noticed a huge deep cut just above the knuckle of the little finger on my right hand. The finger itself was dangling at an odd angle. *Must have gashed it, I thought, when I ejected. Guess I did go through the canopy. Good time now to take inventory.* I looked all about me, checking my hands, feet, helmet, flight suit, boots, life jacket. Except for a slightly tattered flight suit, everything seemed to be intact. *Wonderful, I thought. Just great. If I hit the ground, I'll be able to walk away—that is, if I don't break a leg or otherwise get hurt upon the landing. I'm lucky. I've known many aviators who had lost their shoes ejecting at even lower speeds and lower altitudes. And if I should hit the water, well, I've got my life jacket, and I'm a good swimmer.*

I realized now I was deliberately keeping myself busy, checking myself, the 'chute's risers, even rationalizing my horrifying misfortune, my agonizing decompression, my aches and pains, by equating it all with the astonishing good fortune I'd had to survive, to be floating gently down, safely, in relative comfort. With time to spare, I had also become somewhat more conscious of all the aches and pains and felt as if my body had been wrung out, and the internal organs and the bones and the flesh were painfully reshaping. My face felt terribly raw and swollen, my hands icily numb and very stiff. I looked at my dangling finger again. The cut was really deep; I could see what was either the tendon or the bone.

Perhaps no more than a minute had elapsed when I suddenly began to feel a slight turbulence in the air, and it reminded me that I had left the plane above a thunderstorm. But the turbulence wasn't too bad. It

rocked me a bit, sometimes lifted me, giving me a slight feeling of zero g, rising in an updraft, momentarily halting, then falling again. But it wasn't bad at all. It gave me something to think about, taking my mind off my fiercely aching gashed finger. What I forgot to think about was that in a thunderstorm, where the barometric pressure is usually lower than normal, my 'chute might have opened not at the 10,000-foot level, but at 15,000 feet, or higher, where the 'chute's barometric sensing device could have been "fooled" and might have opened prematurely.

But now I was no longer gravely concerned about anything, except where and how I would land in the 'chute, hopeful I would not land in water or in one of the many swampy areas along North Carolina's coast. Although in the vicinity of Norfolk when I had ejected, I knew that, from more than nine miles up, I could be swept many miles from Norfolk, and might not land in Virginia at all.

Nonetheless, I was most pleased with the thought that I had seemed to maintain consciousness all the way down. True, there were moments when I thought I'd pass out from the severe pain of decompression, but I could not recall anytime I might have passed out. I could not recall any moment when I had to ask myself, *What happened? Where am I?*

I knew my body had been subjected to tremendous shock and had accordingly responded by shooting huge doses of adrenalin into my blood, helping me survive the shock, helping me fight for survival, helping me to think rationally. On the ground, I'd probably suffer from post-shock depression and weakness; I might even be helpless for awhile; but why worry about it now? Under the circumstances, overjoyed to be alive and going down safely, consciously, even the increasing turbulence of the air meant nothing. It was all over now, I thought, the ordeal had ended.

But it hadn't. I was about to plunge into the center of the storm.

The first clap of thunder came as a deafening explosion, followed by a blinding flash of lightning, then a rolling, roaring sound which seemed to vibrate every fibre of my body. The lightning was so close, so brilliant that even after I had instinctively closed my eyes I got the sensation of

“seeing” a deep red outside. Then the thunder and lightning combination continued, relentlessly.

Throughout the time I spent in the storm, the booming claps of thunder were not auditory sensations; they were unbearable physical experiences—every bone and muscle responded quiveringly to the crash. I didn’t *hear* the thunder, I *felt* it.

I felt that if it had not been for my helmet, the tight, cushioning fit over my ears, the explosions of thunder would have shattered my eardrums irreparably. It was my only feeling of solace, of joy and gratitude—that I had been a stickler on the rules of the game and had always tightened my helmet to avoid losing it in the event of an emergency ejection. I was grateful for it when I fell through the frigid, sub-zero temperatures, having given me at least partial protection; I was grateful for it when I thought I had gone through the canopy, and when it protected my skull against the blast of air after I had been shot out of the plane. But now it was a downright blessing to have its cushioning effects against my ears—and later its protection against pounding hail.

I used to think of lightning as long, slender, jagged streaks of electricity; but no more. The real thing is different. I saw lightning all around me, over, above, everywhere, and I saw it in every shape imaginable. But when very close it appeared mainly as a huge, bluish sheet, several feet thick, sometimes sticking close to me in pairs, like the blades of a scissor, and I had the distinct feeling that I was being sliced in two.

As the huge bolts of lightning streaked past me, I thought of the phenomenon we call St. Elmo’s fire, the static electricity that dances along the wingtips of an airplane in flight, especially an airplane that might have just passed through a storm. I have seen St. Elmo’s fire leap from wingtip to wingtip, and I have seen planes seriously damaged by it. I once saw an airplane with huge, gaping holes in its metallic skin, burned through by St. Elmo’s fire. I began to wonder whether it was possible for St. Elmo’s fire to dance off a human form, one that had been tossed so violently and at such high speeds through a storm that it might have been building up its own enormous reservoir of static electricity. I was no expert on lightning, but I had always assumed that lightning did not strike unless it were attracted to another body of an

opposite charge and that the earth, being such a body, was a constant attraction for lightning; and that lightning would do no harm unless it went through you into the ground. I was not grounded in the air, of course, but it had been raining and everything seemed so wet, so drenched I felt almost certain that the saturated air would have been ground enough for the lightning to pass through me. Many times lightning struck so close I thought, indeed, it had passed through me. I cannot be sure it did not.

What concerned me most was the possibility of lightning striking my 'chute and melting it as rapidly as a tiny ball of cellophane might disappear in a roaring fire. Theoretically, this would have been a rare, if not impossible, occurrence; or so I thought. Where was the contact between the 'chute and the ground, to attract the lightning and to make it possible for the lightning to cause damage? Well, I had seen huge shots of lightning seemingly jumping from one part of the clouds to another, like immense spark-plugs firing in the dark. What was there to prevent lightning from going through my 'chute during one such charge, or to prevent the 'chute itself from attracting lightning? Had I known at the time lightning has been seen striking down huge balloons, such as the one ten stories high, hailed as the world's largest balloon, launched by a Naval Air Station in Georgia, I would have been utterly terrified—if it were possible to have been more terrified in that fiery, exploding chaos we have so politely labelled thunderstorm.

After each flash of lightning, everything turned completely black. I was lost in a pool of ink. During the intense brilliant light, when bolts shot by, the clouds seemed to boil around me, sending up huge vaporous balls of grayish cotton. Even when I kept my eyes closed the lightning had a blinding effect.

Invariably, lightning struck in uncanny synchronization with claps of thunder, followed by a rolling explosion which literally shook my teeth; I could feel the vibrations on my teeth as though a giant tuning fork had been struck against them and held there. The lightning-thunder combinations seemed to come at least once or twice each minute. I wondered whether anything like this had been taking place on earth below, whether it was as black down there as up here. It was not, of course,

although later I learned that this storm was one of the most violent ever recorded on the East Coast.

I think actually it was the combination, the one-two jabs of lightning and thunder, that filled me most with the fear that I'd never survive the ordeal. At one point, I saw such an eerie effect that I thought I had already died. I had been looking up in the direction of my 'chute, when a bolt of lightning struck, illuminating the huge interior of the 'chute's billow as though it were a strange white-domed cathedral, and the effect seemed to linger on the retinas of my eyes. For a moment, I had the distinct feeling that I was sailing into a softly lit church and at any moment I might hear the subdued strains of an organ and a mournful voice in prayer—and I thought I had died. *Maybe this is it, I thought. This is the way it all begins after death. You're dead, Bill. It's all over. Now you'll have peace.*

If this was my moment or two of irrationality in the storm, I don't know and may never know. I do know that I distinctly encouraged myself to have hope, to fight back. Yet there were times when I felt I might die of sheer exhaustion because it seemed as if either the storm might never end, or I was going to be swept along with it on its insane journey up the coast for as long as that journey might take—hours, days. This feeling was most intense when I decided to look at my watch and glimpsed the time during a flash of lightning. At first I thought what a wonderful thing it was not to have lost my watch all through ejection, decompression, blasts of air, and now this; and, then, what a silly thing, looking at the time! But when I saw that it was twenty minutes past six, I thought: *My God, you should have been on the ground at least ten minutes ago! You are really trapped. You are really in the pattern of the storm and a part of it, a speck of human dust, up-over-and-down, up-over-and-down and that's the way it's going to be. But how long? For how long?*

I don't remember whether I had looked at my watch again after that, although I seem to recall vaguely that I did, perhaps several times.

Nonetheless, I was preoccupied with more than turbulence and thunder and lightning (such mild words!). It had been raining torrentially all through the storm, but sometimes the rain was so dense and came in such swift, drenching sheets, I thought I would drown in

midair. It was as though I were under a swimming pool, and I had held my breath several times, fearful of drowning. If I had not run out of oxygen, I would have held the mask over my face as protection against drowning. Sometimes, I was tempted to put on the mask, thinking that I'd rather suffocate to death than drown.

How silly, I thought. They're going to find you hanging from some tree, in your parachute harness, limp, lifeless, your lungs filled with water, wondering how on earth did you drown! Sometimes, I found myself gasping for air as if I actually were drowning.

Occasionally, I'd look up to try and see what was happening to my parachute. I was concerned about the 'chute collapsing or losing some of its panels, which might cause it to collapse or practically cause me to fall so rapidly the impact might kill me. And during one such observation, I saw and felt what I shall perhaps never witness again (unless in a thunderstorm). A sudden and violent blast of air, coming from the long dark narrow corridor in the storm, apparently hitting me with greater force and just prior to hitting my 'chute, sent me careening up into the 'chute itself.

At least I am convinced this is what happened, for I could feel the clammy silk draped over me like a large wet sheet. The 'chute was collapsed over me and I felt sure I had become tangled in the lines and was doubtful that the 'chute would ever blossom again properly. *When they find my body they'll say my 'chute never opened, but they'll be wrong again.* A few moments later, however, there was a mild jerk on my body harness and once again I had good, taut, risers. The impossible had happened.

Seeing the 'chute intact was a source of encouragement to me. *If this damn thing can survive, I thought, so can I.*

The moment I had most felt that I had become a part of the pattern of the storm was when the hail struck. From all-weather flight studies, I knew that hail formed in a storm as a result of drops of rain being caught in the turbulence of the storm's drafts, being shot up to higher, colder levels, freezing, solidifying, then falling, then being caught and shot up again, re-freezing and solidifying and growing in size, until they would spill over and come down to earth, melting as they reached warmer air.

From the way I had been pelted by relentless showers of hail, I think that if most hail did not melt prior to striking the earth it would number among nature's most calamitous phenomena. Even now, as I understand, hailstorms are a serious agricultural problem in America, frequently ruining as much as \$100,000,000 worth of crops a year.

Experts tell me that unbelievably large chunks of hail have been known to strike the earth, such as the time during a thunderstorm over Potter, Nebraska, in 1928, when hailstones as large as seventeen inches in circumference, weighing well over a pound, were officially recorded.

A U.S. Weather Bureau official once said, "A violent hail storm has to be experienced to be believed." I could believe it.

During my bouts with hailstones in the storm, I felt as though I were being pounded by a symphony of hammers, drumming at every part of my body. Sometimes, hitting my helmet, the hail gave me the feeling it was raining baseballs. I don't know how large the hailstones were because I cannot recall seeing them. I was afraid to open my eyes during those seemingly interminable moments when hail struck. Later, from the mass of black-and-blue welts covering my body no calipers were needed to know that the hailstones were large—and hard. It was also during periods of hail strikes that I thanked the Lord for having my helmet. I am certain that without a helmet I would have suffered severe head injuries, at least concussion, quite probably a fractured skull.

Luckily, during lulls in the storm, lulls lasting perhaps ten to thirty seconds each, my mind remained active, thinking about what I would do upon finally landing. I continually reminded myself that, when breaking out of the overcast, I should be sure to get the lay of the land. If coming down over water, make a mental note about wind direction, wind force, and the direction of the shoreline. If coming down over land, note the terrain, its character, whether wooded, possibly swampy; look for signs of civilization—houses, farms, roads.

Remaining mentally active, I think, prevented me from losing my mind, at the very least from panicking. I was terrified, but not petrified. I knew that in spite of some severe moments when I felt as if I might pass out, I had been conscious all the time. I cannot, of course, be certain of continual consciousness under such circumstances, but one of my most vivid recollections is never at any time during the entire descent, from

moment of ejection through the storm, did I feel as if I had been “out of this world,” as in a daze.

Meanwhile, my thoughts stimulated by the pattern of hail formation, I was mainly concerned about how long I would be trapped in the storm’s pattern. My most frightening thought came when I remembered our gunnery training in Guantanamo, where tropical thunderstorms were almost a daily affair, and some of the thunderheads seemed to remain over one area for days and weeks at a time, building up day by day before unleashing their elements over land. There had been one thunderhead that had remained almost stationary over the bay for so long, and with such seeming permanence of station, that we used to refer to it as the “duty storm,” always there like a duty officer at headquarters. We’d fly around it and over it by instinct, as though it were an immovable traffic island in the sky. I wondered, fearfully, whether I might not have been caught in a “duty storm,” which are also common during the summer months over Norfolk’s waters.

I think that’s when I gave up trying to look at my watch. I had reconciled myself to a hard, long battle and continued to fight it, armed with hope and mental activity. I thought of myself as being on a strange ferris wheel of nature, and sooner or later the turbulence would have to run out of energy, releasing me gradually toward earth.

Eventually, I realized that the air was getting smoother, and the rain was falling more gently. Looking up, I could see my white ‘chute clearly against the gray clouds. I could sense that I was near the earth, and I knew that below the storm I would probably have only two or three hundred feet of ceiling. Suddenly a patch of green flashed through a break in the clouds. Then instincts took over again: *You’ll soon be down; you’re not over water, so try to orient yourself when you break out into the clear.*

At last, I was coming in for a landing! *Now, I thought, just make it a good one. Gather your wits. Watch your landing speed. Don’t get killed, after all this, in a bad landing!*

It was an enormous relief, seeing a little bit of green and then seeing the green growing wider and wider until I was, at last, completely out of

the storm and perhaps no more than 300 feet from the ground. I forgot instantly about my aches and pains and exhaustion. I concentrated on looking over the landscape. It was still raining rather hard and while it was not yet night time, it was prematurely dark on account of the storm; there was barely enough light to outline the wooded area below me. It appeared to be a pretty dense evergreen forest. I looked for signs of civilization, a road, a farmhouse, farm fields, any landmark by which I might guide myself out of the woods. I felt a sense of direction was urgent because in my weakened state I did not relish the idea of walking into a swamp.

I could only see what happened to be some sort of field, as though cleared for agricultural use. Then I noticed that I was barely over the outline of tall, sharp treetops and sweeping past them rapidly, as though I were in a speeding auto looking down at a green road slipping under the wheels. I estimated that I had been moving over the ground at thirty-five to fifty mph. (I learned later from a Navy aerologist that the wind in the area was recorded at 35 to 40 knots on the ground).

I had suddenly begun to oscillate in the parachute and was heading into the trees as though I were going to be slammed, not dropped, into them. Instinctively, I gritted my teeth, closed my eyes, crossed my legs and cupped my groin. At the rate I was zooming into the trees with their sharp-looking boughs pointed out and curving up I was almost certain I'd be impaled.

I was prepared for a violent landing, but it was not as bad as I expected. I seemed to swing out in the direction of the wind when my 'chute caught in the tree-tops. Like a large pendulum, I came swinging back through the trees, the pine boughs helping to slow me down. I remember striking a tree. Then I was on the ground, lying on my left side. I simply could not believe that I was on the earth—that I had survived. I lay there vibrating.

The Man Who Rode the Thunder (1960)