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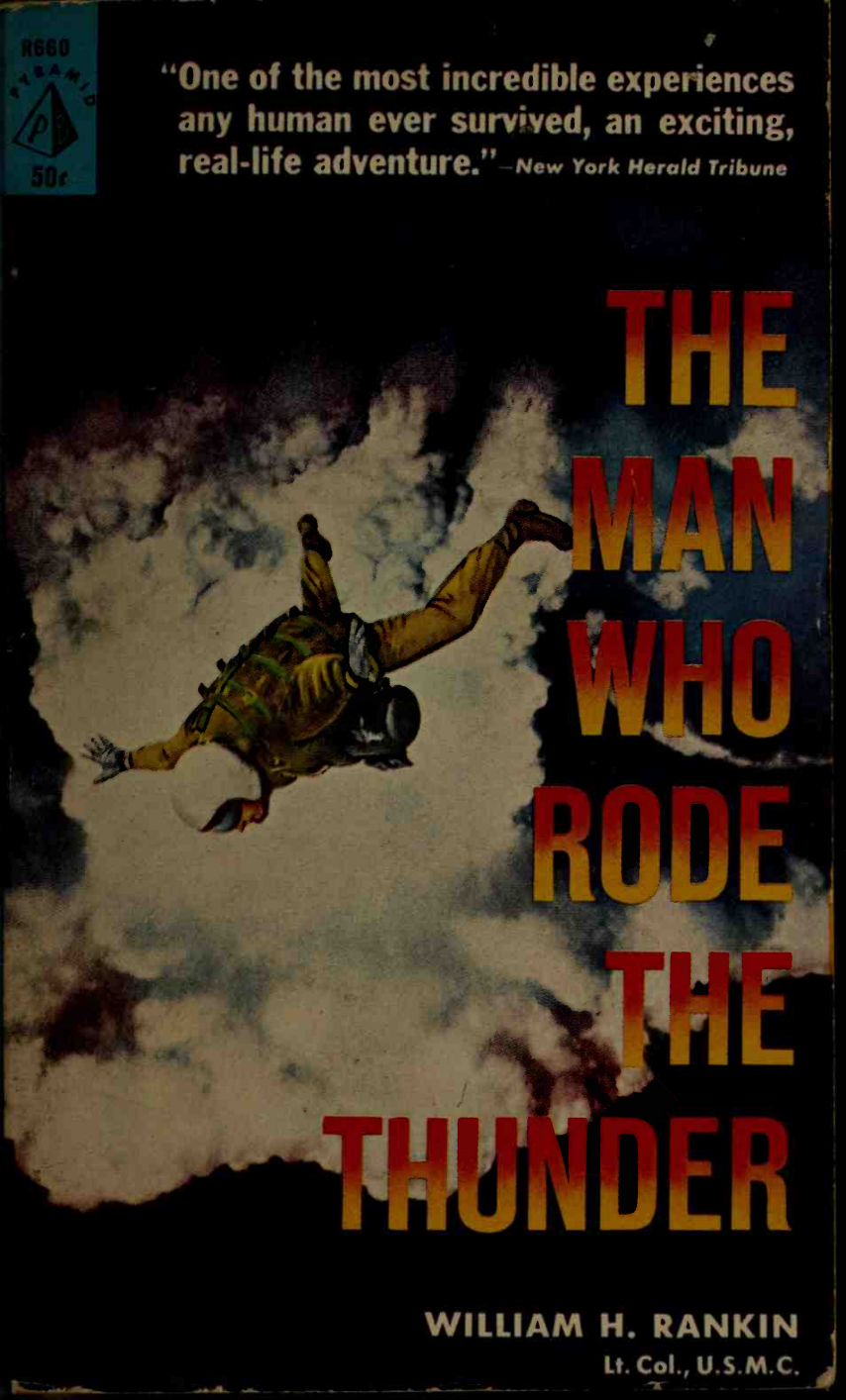

THE MAN WHO RODE THE THUNDER

WILLIAM H. RANKIN
Lt. Col., U.S.M.C.

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The Man Who Rode The Thunder

William H. Rankin
Lt. Col., USMC

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THE MAN WHO RODE THE THUNDER,
by William H. Rankin, Lt. Col., USMC

This book is dedicated to John Skorich who was first and foremost a top Marine

For the Record

In writing this book I have had the valuable assistance of Mr. Harry Kursh, of Peekskill, New York. His unique talents have helped me, especially with regard to the chapters dealing with the ejection and captivity in the storm, to recall details and clarify situations that otherwise might have remained obscure. His abilities have given shape and direction to this narrative, and I wish here to record my indebtedness to him.

I also would like to state that it is with misgivings that I have accepted the title of the book, which was suggested by the Publisher. Referring to myself as *the man who rode the thunder* smacks of a degree of egotism, if not arrogance, which causes me some discomfort. However, the Publisher feels that the phrase has become associated with my name, and that it is appropriate the title of the book should thus identify the story it tells.

W. H. Rankin
Lt. Col., USMC

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. . . at last his sail-broad vans
He spreads for flight, and in the surging smoke
Uplifted, spurns the ground; thence many a league
As in a cloudy chair ascending rides
Audacious; but, that seat soon failing, meets
A vast vacuity: all unawares,
Fluttering his pennons vain, plumb-down he drops
Ten thousand fathom deep, and to this hour
Down had been falling, had not, by ill chance,
The strong rebuff of some tumultuous cloud,
Instinct with fire and nitre, hurried him
As many miles aloft . . .

With fresh alacrity and force renewed
Springs upward like a pyramid of fire
Into the wild expanse, and through the shock
Of fighting elements, on all sides round
Environed, wine his way . . .

. . . at last the sacred influence
of light appears . . .

. . . a broken foe . . .
Wafts on the calmer wave by dubious light,
And, like a weather-beaten vessel, holds
Gladly the port, through shrouds and tackle torn;
Or in the emptier waste, resembling air,
Weighs his spread wings, at leisure to behold
Far off the empyreal Heaven . . .

John Milton
PARADISE LOST, Book II (1667)

We are proud of the accomplishments of our aviation personnel. We are proud of their determination to remain, man for man and plane for plane, second to none in the world. We are even more proud that they do not seek glory for themselves, but rather for the whole Marine Corps . . .

General Clifton B. Gates,
Commandant, 1948-1951
U. S. Marine Corps

Chapter 1

Not by Choice

IT WAS A WARM AND humid night in May, 1960; I was in my quarters at the Armed Forces Staff College on the outskirts of Norfolk, Virginia. After a day of lectures, research and studying, I had been looking forward to a good night's rest. I was about half asleep in bed when I began to sense a stillness in the air. As I opened my eyes for a glance at the window, a sudden flash of pale light painted my room an eerie blue. In the deep darkness that followed the flash, I knew immediately what to expect—a thunderstorm.

Like so many thunderstorms, this one came gradually. Scattered drops of light rain followed the calm. Then came a little breeze and more rain and more blue flashes and the rumbling of distant thunder. Finally, the breeze changed to a fierce wind and sheets of rain lashed the windows. Blinding stabs of light ripped jagged wounds in the darkness. The rolls of muted thunder exploded in deafening claps, one after the other. The windows of my room rattled, the walls shook, the floor trembled.

I wondered how often people—even while safe in the shelter of their homes—have been terrified by such monumental fury, have almost been struck dumb by the gigantic savagery of the spectacle. And I wondered how many of them realize that what they see and hear beneath the storm is actually mild, compared with its internal turbulence.

Less than a year before, not far from where I lay, I had been forced to parachute into the very vortex of one of the most violent thunderstorms ever to strike the East Coast. Virtually stuck in its raging throat, I had been a helpless captive, dangling underneath a few yards of nylon, in a scene of pandemonium almost indescribable. I came through it, according to the Naval Aviation Safety Center, with the distinction of having survived the longest and most fantastic parachute descent in history.

Since then, until this May night in my room at the College, I had not witnessed another thunderstorm; and as the intensity of the storm grew, I felt a peculiar compulsion to lie awake, as if to test my nerves against the memory of my ordeal. But instead of fear, I felt a subtle kinship to the storm, almost as if we two had some secret between us that no one else on earth could share. And suddenly, with unbelievable clarity, I could see myself in the storm again. So sharply stirred was my memory that the fresh details of my experience sprang vividly to life—details I had been unable to recollect (hard as I had tried) for my official accident report or for medical investigators. I knew then that a thunderstorm would never again be for me a commonplace event.

It had been a clear, sunny day in July, 1959. I was flying the beautiful, swept-wing F8U *Crusader*, a supersonic jet plane, in a routine high-altitude flight from Massachusetts to South Carolina. I was just below the speed of sound and had eased past 47,000 feet in a cruise climb to get over an unusually high thunderhead when my engine faltered and the red warning light flashed in my cockpit. From that moment, I was to have only seconds in which to analyze my situation and decide.

All my alternatives left me facing almost certain disaster. If I chose to eject, for instance, I knew that I first would be smashed into a veritable tidal force

of wind. Then, if I were lucky enough to survive that impact, there would be any number of other situations that could bring my life to a quick and spectacular end.

Most importantly, I was not wearing the pressure suit recently designed to bring high-altitude jet pilots back alive. For protection against extremely low sub-zero temperatures and the cruel effects of near-explosive decompression, I would have to rely only on my helmet, gloves, and an ordinary summer-weight flying suit. I knew that all exposed parts of my body, even my eyeballs, might be instantly frozen; and from the split-second of ejection, every organ of my body, including my eyes, ears and nose, could be severely bruised or ruptured by the extremely rapid decompression. It would be a jet-age form of torture, which we had been trained to expect, but which few had experienced, and fewer still had survived.

How do you ride out a thunderstorm in a parachute? There was nothing in the books about this. If any other aviator had parachuted through a thunderstorm, he never lived to pass on any helpful hints. Not long before, a comparatively young three-man civilian test crew had almost made it. Flying over Texas in a supersonic jet bomber, they had been forced to bail out into a thunderstorm. All three floated down through the storm but as soon as they hit the ground, they were dragged over rough terrain and were battered to death. One of them smashed into the wall of a farmhouse, a mile from where he had landed.

All through flight training, whether as a cadet or as a seasoned pilot taking advanced all-weather flight instruction, you learn one thing about thunderstorms: avoid them! Fly under them, above them, around them, or turn back. But if you're forced to fly through one, even in the fastest and sturdiest of aircraft, take the shortest route possible and don't try

to fight the violent up-and-down drafts, which are capable of shooting heavy airliners straight up or down at the rate of hundreds of feet per second. Just be thankful, when you cannot avoid a thunderstorm, if you can maintain some semblance of straight and level flight and come out in one piece.

Knowledge of thunderstorms is essential in military and civilian aviation. Largely because of improved meteorological research techniques and radar, since the end of World War II we have acquired much precise knowledge of how a thunderstorm builds up and how its internal cell-like turbulence is constructed. It is generally agreed that the greatest turbulence in a thunderstorm exists in about the lower third, although the top of the storm may mushroom out at over 40,000 feet.

While models of thunderstorms have been erected in laboratories, no one had ever been able to describe, through personal observation, the exact internal phantasmagoria of a thunderstorm's principal elements: wind, hail, rain, lightning and thunder, and the violent up and down drafts. The closest man had come to such internal observation was a Promethean three-year study (1946-49) which came to be known as the "Thunderstorm Project." It was sponsored jointly by the U.S. Air Force, Navy, Weather Bureau and the National Advisory Committee for Aeronautics. Involved were an intrepid group of volunteer pilots, who flew P-61's, *Black Widow* night fighters, into a great variety of thunderstorms. They made a total of 1,363 penetrations, at levels ranging from 5,000 to 25,000 feet. The tremendous amount of data they gathered led to many important findings vital to aviation and meteorology.

Commenting on some of the theories produced by "Thunderstorm Project" data, one science magazine had this to say: "Regardless of how or when they start, thunderstorms are something . . . to respect.

They contain violence of more kinds than any other phenomenon of weather."

I learned something about this violence during the eternity I was held in the grip of the storm—nearly forty minutes or about four times longer than I should have remained aloft in a descent from over nine miles up. I heard and felt thunder and saw lightning such as it had never before appeared to man. (Ironically, at one moment when I thought that I had survived the worst of everything and would get down alive, I was hit by a torrential rain which made it almost impossible to breathe without sucking in a mouthful of water. I almost laughed when I thought of the possibility of being found, hanging from a tree in my parachute, dead from drowning.)

But after it was all over, after I had been rescued, given emergency medical treatment and transferred to the naval hospital at Beaufort, the subsequent news reports led to a new sort of ordeal, one for which I had neither been trained nor prepared. While fate and my Marine training had not let me become a freak fatality, the press insisted on crowning me as a hero. At first the journalistic coronation was amusing. But it became annoying. I was not a hero. I was, in the eyes of the Marine Corps, nothing special. I was, am, and hope to remain a Marine officer and a professional military aviator who, by belief in and the practice of arduous training and physical fitness, has been geared mentally and physically to react to every possible hazard and emergency, in war and peace, with almost instinctive responses. I have never believed in heroes or hero worship. I do not believe that anyone becomes a hero by choice. We are, by circumstance, sometimes thrust into situations which may leave no alternative but daring or prodigious effort. If my battle to survive a unique challenge had called forth "superhuman" effort on my part, it was nothing more or less than that which could have been

expected from many other men trained like myself.

Yet from all parts of the nation I was besieged by every imaginable news and entertainment medium (except the Broadway stage) to tell, sell, write or act out, in every grim detail, the story of how I rode the thunder and survived. In keeping with the traditional public policy of all our armed forces, I granted interviews to a steady stream of writers from newspapers, newsmagazines, newsreels, radio and television and politely turned aside suggestions that my life story would make an exciting motion picture. After awhile, it seemed as if everyone who knew what had happened to me, referred to me or even introduced me as "the man who rode the thunder." I finally decided to refuse to appear on one nationally known television show, because I was warned in advance that the personality in charge might attempt to exploit the details of my experience for humor, rather than public information. I had also declined all offers to write a book about my "adventure."

However, during the weeks I was in the hospital, I received from all over the United States, and some foreign countries, clippings of stories about me. Often, clippings were sent by total strangers, sometimes from women who, upon learning that I was not quite forty but still a bachelor, blandly sent the clippings as an excuse to propose marriage. Many letters were quite touching, offering prayers, best wishes, and tributes to the Marines; and these letters, particularly those in the latter regard, I tried to accept with humility and pride for the entire Corps.

But as I went over one story after another, I found myself growing considerably irked. There was not one correct in its entirety. Many were completely in error. I was quoted with remarks I had never made; and other remarks I had made were distorted beyond recognition. Nearly every writer erred on such easy-to-grasp details as the times, speeds, and altitudes

involved. I did not know, nor did I care, whether all this had arisen as a result of deadline pressures, negligence, sloth, or just plain incompetence. But I did care about the misinformation being conveyed to those millions of people, and perhaps thousands of the nation's future supersonic pilots, who were being introduced to the great and complex problems of high-altitude, high-performance, jet aviation. I most certainly cared, too, about the general neglect of these stories to place Marine Corps aviation in its proper perspective.

In the end, I realized that, if nothing else, I had an obligation to the literature of aviation to set down all the facts and to do so accurately. Also, it occurred to me that my "adventure" had provided an unexpected opportunity to present part of the story of a unique Corps of fighting men who have played a large role in the history of this nation's defense. Of course, I could not and would not pretend to write a history of the Marines. Instead, I could hope to reflect the spirit of that history by writing an informal and candid account of my own microscopic role in the modern U.S. Marine Corps.

If even a small part of my story contributes to a better understanding of the Corps, or Marine aviation, or to the literature of aviation in general, I shall feel well rewarded for having accepted the challenge and the privilege of writing this book.

Chapter 2

When the Dust Clears

MY OFFICIAL INTRODUCTION to the U.S. Marine Corps was such a gentle experience that I almost believed I had enlisted in the wrong outfit.

On the afternoon of April 23, 1940, less than a year after my graduation from Langley High School in Pittsburgh, I went alone to the Corps' recruiting office in the old Post Office building in downtown Pittsburgh to be sworn in. From my strictly Hollywood-influenced impressions of the Marines, I had expected a tough man barking orders at me out of the side of his mouth; and when I found that I was the only one to be sworn in, I became somewhat apprehensive. But when I was ushered into a large panelled room, a rather pleasant-faced Marine major with a soft voice and serious, almost fatherly manner, put me at ease throughout. Gravely, he asked me to rise, stand at attention, face the flag and repeat the oath after him. Then, as if I were his son about to leave for freshman year at college, he lectured me on what to expect in the Marine Corps, how to take care of myself at the Corps' famed "boot camp," Parris Island, and patiently answered for me what I now realize was a peck of silly questions. But within forty-eight hours I was promptly introduced to the toughness I had expected.

About a dozen of us had arrived at a dusty, unprepossessing railroad station some fifteen miles from

Parris Island. When we got off the train, we looked at each other with an air of disappointment. The setting was desolate. Beyond the little old station house, there was nothing but flat, swampy land. There wasn't even a railroad platform. Suddenly, from an olive-colored, open six-by-six truck with a tarpaulin cast loosely over its top, a Marine sergeant jumped out of the driver's seat and shouted, "Fall in!" None of us moved. It meant nothing to us. We stood staring awkwardly at him. Dressed in an old campaign hat and raincoat, he looked crusty and tough and strong. Shoulders squared, back stiff, he strutted briskly toward us, halted, placed his hands on his hips and in measured words between clenched teeth, he said: "Now, look, you guys. When I say 'fall in,' I don't want to see you move. I just want to see a cloud of dust. And when that cloud of dust clears away, I want to see four rows of living statues and not one moving. Now—*fall in!*" I don't remember the cloud of dust, but I think even Michelangelo would have been proud of the statues.

From then on, everything happened almost as I had expected. Hollywood did not let me down. Boot camp was tough. My drill instructor, a legendary Marine Corps specialty, kept us hopping from one activity to another. Repeatedly, we were told to be proud. We were Marines. We were tough because we were fighting men and had to be tough. We were to ask no quarter, give no quarter. We were to be proud of our buddies, our Corps, our rifles, our nation. We were to be serious about training and obey orders at all times instinctively. At first, many of the recruits who had arrived with me found the regimen hard to take. But I had truly enjoyed it. In fact, so impressed was I that shortly after I had been issued my rifle, I used my civilian shirt to clean it.

The first born of three children, I had always en-

joyed a sense of competition, the tougher the better. From the time I was a boy in elementary school, I had felt self-sufficient and resourceful, always managing to do some work to earn extra money. I held newspaper routes, shovelled coal, cut lawns, cleared snow, delivered groceries and set pins in a bowling alley. In high school, thriving on competition, I excelled at team sports and had done well in football. After I had graduated, my football record attracted several college scholarship offers. But going to college somehow did not appeal to me. I wanted to see something of the world, and after several petty jobs —on the railroad, in a carnival, and resort lifeguard —I felt that only by joining one of the services would I get a chance to see something beyond Pittsburgh. I chose the Marine Corps because a neighbor, who had been a Marine, fired my imagination with tales of exotic and faraway places, and because of the Corps' reputation for challenge.

Getting to be a Marine was akin to training with a new football team; I had found it particularly enjoyable to watch as day by day more and more of the recruits, their bodies hardened, stopped griping about the vigorous physical activity and grew increasingly proud of their ability to cope with the hard, sometimes harsh, training program and come through with flying colors. Years later, I was to realize that this sense of having survived an "ordeal" *together* was one of the principal elements in that nebulous something called *esprit de corps,* for which the Marines have won world renown.

The basic objective in Marine Corps training has always been to produce Marines who are individuals yet smartly disciplined, physically fit, technically competent, and thoroughly indoctrinated in Marine Corps pride and love of country. But discipline is not based upon fear of overbearing authority. Through intensive training and indoctrination, the Marine re-

cruit is taught to be proud of his team, yet have confidence in himself. This is his discipline; and even when the last semblance of authority has vanished, especially on the battlefield, his discipline endures. I remember a battle in Korea when an officer, with whom I had been in recruit training, was severely wounded. Rather than be taken from his post, he ordered his men to carry him on a stretcher and thus, going from battle station to battle station, he gave orders and planned tactics.

I have seen this same spirit in the air, on the ground, under all sorts of combat conditions. It is military professionalism, which is what is expected of all Marines, from privates to generals. Hence, it is no accident that ever since the earliest days of our history this nation has relied on its Marine Corps to remain a combat force of instant readiness, to be prepared to walk, ride, run, sail or fly into combat within hours after a call from the White House.

Marines understand this and because of this they have learned to value highly the unique importance of the drill instructor at the Parris Island and San Diego recruit depots, the famous "DI." At times, overzealous DI's have been excessively harsh, even cruel. I had seen some of this cruelty myself in boot camp. I was a victim of it once when a sergeant insulted me profanely and punched me on the back of the neck. I had done nothing wrong. He did it because he disliked me personally. Enraged, I hit him and sent him reeling against the wall of the barracks, blood oozing from his mouth. I was prepared for the inevitable court martial, but when my officers learned the facts they decided that I had been unjustly provoked; the DI was punished, not me.

Nearly every service has had and still has its difficulties with sadistic, overly ambitious non-com's. Somehow, when it involves a DI, it becomes an occasion for nation-wide comment. Perhaps some people

can lay claim to having eliminated human problems —the Marine Corps cannot. It has always strived to eliminate the worst and select the very best possible men to be DI's; and there has been enormous progress along these lines. I can see a tremendous difference even now between the DI's of today and the DI's when I was a recruit. But in the light of historical fact, the progress has been even more remarkable.

Although its fighting tradition goes back to the Revolutionary War, the Marine Corps was never really a large Corps until World War I, when it grew almost overnight from 3,000 to more than 75,000 men. The rate of expansion was unprecedented for any service. Under any circumstances, this sort of expansion would have created a serious training problem. But combined with the need to train Marines for a new type of trench warfare—and in a hurry, because we wanted to show our flag for the Allies—the training problem was virtually overwhelming. Unlike other armed forces, the Marine Corps had neither the tradition nor the large officer body for quick mass training. Consequently, the Marine Corps was almost compelled to rely on noncom's, who were classified as drill instructors, and they had to be given unheard-of latitude in their dealings with recruits. After the war, with the advantage of hindsight, the Corps realized that some of the liberties taken by DI's were unpalatable and unsuited to the traditions of a free nation. Gradually, the Corps worked to eliminate the undesirables among DI's, but the tradition of the DI as the kingpin in recruit training has grown vital to the Marine Corps. Nearly all Marines I have known wear their "graduation" from Parris Island or San Diego as a badge of distinction.

Much of my World War II service consisted of defending the island of Funafuti, in the South Pacific,

which was necessary as a stepping stone in our advance north toward Tarawa and the Marshall Islands.

The Japanese found our presence (and our supplies) on the atoll inviting targets for sporadic bombings. Compact as we were on Funafuti, I suppose it was inevitable. There were many bombing casualties. Being hit repeatedly but not being able to hit back is perhaps more destructive to a man's equilibrium than being in direct combat, where you are generally far too preoccupied to become tense or grow fearful. In my years to come in the Marine Corps, I was to learn the hard way that when you're busy fighting to save yourself you don't have time to sense fear. Sometimes, after a bombing on Funafuti, especially after a direct hit on a tentful of men, the tension hung over us like a taut web which might go to pieces at the slightest touch.

While on Funafuti I received a field commission and before I left the South Pacific I was to receive others; but my fondest memory of Funafuti concerns a lesson in nobility of spirit, taught to me by a native.

Ever since my teens, and throughout my career in the Marine Corps, I have been an intense believer in physical fitness. I had always felt that keeping in tip-top trim was not only an excellent way to stay healthy, but it made me feel alert, often saved me from boredom, added bounce to living, and several times saved my life. But also, ever since my high school days I had learned that it was sometimes difficult to find a partner to help me enjoy some active sport, like handball or wrestling or boxing. Consequently, I took to weightlifting, which I found increasingly enjoyable. I didn't need anybody. I could always make a set of weights out of cement-filled cans attached to an iron bar and I could work out in my own basement or backyard. It was also a competitive sport. I was in competition with myself and the weights, learning form, acquiring strength and

deriving a sense of satisfaction in defeating the next day or the next year the weights I had been unable to lift before. It was no different from a track and field man competing with himself in striving to run faster, jump farther, or vault higher. No matter where I have been in the Marine Corps, from boot camp to Korea, I have always managed to make or take along with me a set of weights; and sooner or later I'd be in charge of a physical fitness "class," centered on weightlifting, including privates, generals, and Marine wives. It was no different on Funafuti.

On the atoll, I had made sets of weights by filling empty five-gallon cans with cement, with metal pipes for bars. Some of these sets weighed over 200 lbs., and after learning the technique, a number of my men could lift the heaviest weights with ease. Soon, the natives were clustering about our beach emplacements or huts to watch our grunt-and-groan weightlifting sessions. At first they were amused, then curious, then tremendously impressed. Most of the natives were powerfully built; by comparison, some of our men and some of our best weightlifters looked frail. But after some of the huskiest natives had failed to lift our heavier weights, although we could do it, they became annoyed with themselves. They thought only in terms of sheer strength, neglecting the fact that weightlifting is a skill and an art which enables the lifter to handle more weight than he might ordinarily be capable of.

Once, after a workout, I was wiping myself down with a towel when I looked up and saw what amounted to an entire village of natives parading toward me. Led by Noah, a genial young native who had been to missionary school and spoke some English, they appeared to be talking excitedly among themselves. When they halted in front of me, Noah stepped out, pointed to the weights and said, "You lift. He lift. Contest." He raised his hand toward

the group, and a handsome lad of about nineteen stepped out. He was at least six feet tall, weighed about 200 lbs. and was impressively muscular. Noah said his name was Budda and added proudly, "He, our strong man. *He* beat *you!*"

"Nothing doing, Noah," I said, laughing. "I just finished my workout. I just took a shower. I don't want to get all sweated up again."

I suggested to Noah that if a man were strong he did not need anyone to compete against. If Budda could lift the weights, he could and should do it without me. Noah told Budda what I had said, and the husky young man stepped up to the weights. He bent confidently over the 200-lb. set and as if to test the holding power of the iron bar, he lifted the weight off the ground with ease. This kid is a brute, I thought. He'll have no trouble getting that set over his head. But lifting a heavy weight off the ground slightly, is not the same as lifting it, arms straight, over your head. Perhaps overconfidently, Budda bent over again, grasped the bar firmly, and quickly lifted the weight to his shoulders. Up to this point, it was easy for him and his compatriots applauded. Thus far, no other native had succeeded in lifting that weight to his shoulders. But when he attempted, somewhat clumsily, to lift the weight past his shoulders and over his head, I knew he was in trouble. Just as the weight was in front of his nose, a critical point, he lost his balance momentarily; it was enough to destroy his lifting capacity. He grunted, groaned, gritted his teeth but could not lift it above the level of his eyes. If he had known the art of *splitting*—a simultaneous motion of lifting the weight straight up, dropping down and scissoring your feet fore and aft—he would undoubtedly have lifted the weight as if it were paper.

Budda, his face a mask of disappointment but not defeat, returned the weight slowly to the ground; it

would have been embarrassing to let it crash. Abruptly, the natives stopped chattering. They widened their circle about him, as if the added space would help. Now it was a tense, hushed arena. The only sounds came from the gently swaying palm leaves in the coconut trees, and Budda's heavy breathing.

Budda, of course, was going to try again. It was understood. Grimly, he studied the weight for a few moments, wiped his palms against his bulging thighs, and picked up the weight. This time his actions were slower, more deliberate, as though he had learned something new. But again he failed, again he carefully placed the weight down. Now I knew he would never make it. He had sapped the peak of his strength. On his third attempt, he circled the weight several times, as if he were seeking some secret, or some concealed grip that might enable him to do what his friends had told him we Marines had been doing with ease. I could see that Budda was disturbed, under pressure. His pride was at stake, and so was the honor of his village. But his third try was even more futile. Nobody had to say anything. Budda was finished. But was he a failure? Not at all. Could the Marine officer lift the same weight above his head? Let's see *him* try. Noah, the spokesman, was persistent.

I knew I could do it easily. But I was not anxious. What if my feat were to embarrass Budda deeply? Would I be making an enemy whose customs might perhaps cause him to exact retribution for his chagrin? But from their faces and Noah's harangue I realized that more than my reputation was at stake. I was the entire U.S. Marine Corps. If there were honor in the Marines, I would at least try. While Noah was still talking, I decided to do it and quickly, dramatically—painlessly, for them. I threw my towel to the ground, paced quickly up to the weight, grabbed the bar, lifted it swiftly to my shoulders,

split, slammed the weight over my head, jumped erect, placed it behind my neck, did a knee bend with the weight on my shoulders, shot upright again, shoved the weight over my head once more, and briskly returned it to the ground. The natives were utterly flabbergasted. To all outward appearances, Budda and I were evenly matched. I was almost as youthful as Budda, almost as tall, and of equally solid though not sharply muscular build. The natives applauded vigorously and I could see, like perfect sportsmen, they were genuinely pleased. At least I had made some new friends for the U.S. Marines. Budda, however, walked away, as though in anger.

The following morning there was a visitor at my hut, Budda. Arms folded across his chest, he stood formidably at my door. We stood face to face for a moment, then suddenly he grinned, grasped my hand and shook it vigorously. He knew only a few words of English but that, combined with sign language, enabled him to ask me whether I would teach him how to lift weights. I agreed and we began promptly. First, by simulating various actions, I taught him such words as "lift" and "weight" and by sucking in my breath exaggeratedly he quickly got the verb "to breathe." On the weights, I began with 100-lb. sets in order to teach him proper breathing and form. He came almost daily for a lesson, and in six weeks, by means of the unique language between us, he learned how to place a 200-lb. weight over his head exactly as I had done on that fateful day in his life. He had, indeed, learned so well and was so powerful that I think he could have beaten me in competition. As a token of his gratitude, Budda taught me how to climb coconut trees in my bare feet, and how to skin dive. For diving, he taught me to breathe rapidly many times before going in. Today, this is known as *hyperventilation* among skin divers and pilots.

One day, someone thought it would be a good idea to hold a field event, a sort of Funafuti Olympics, Marines vs. Natives. Weightlifting, racing, jumping and swimming were to be the principal events. When the day came, it was a gala occasion. Everyone had fun, the spirit was good, the sportsmanship excellent, the winners and losers about equal on both sides.

Then came the final main event, weightlifting; Budda vs. Rankin. The winner would simply be the one who could lift the heaviest weight above his head. I was to try first, then Budda. Each time we succeeded in lifting the weight, an additional five pounds would be added to the bar. (I now had acquired a set of York barbells.) After we had passed the 200-lb. mark, the spectators watched tensely, for the climax would now come at any moment. Although I now felt I could beat Budda, the thought of doing it somehow made me feel sad. Finally, though, I failed to lift a weight. By this time I knew Budda's capability, felt certain that he could lift the same weight, and would beat me. He grasped the crossbar, lifted it easily to his chest—and could get it no further—or so it seemed to the spectators. The competition was declared a tie. But I knew better; I knew that Budda had purposely declined to "disgrace" his teacher. This simple native had demonstrated a delicacy of feeling that is too often missing in the civilized portions of the world.

Chapter **3**

Wings for an Old Man

I FELT A LITTLE SAD when we left the island of Funafuti. But I felt even worse when I learned that my outfit was destined for a rest camp in the Hawaiian Islands. I knew that most of the men needed the rest camp. For many of them being on Funafuti had not been easy. I had seen many men lose their minds, especially after some frightful bombing, such as the time a bomb landed among a group of sailors, splattering their bodies all over the trees. It was terrible to see something like that and not be able to find emotional release in fighting back.

But for me it was even more disconsoling to end up in a rest camp because I knew that having been out in the South Pacific more than two years many of us might also be returned to the States under a mandatory rotation rule, perhaps permanently ruining our chances of getting into the war again, and like most Marines I wanted to stay in combat. Therefore, as soon as we arrived in Hawaii, I applied for assignment to a fleet gunnery school in Honolulu, hoping that after completing the course, as an officer now trained in the newest weapons, I'd be sent out to join a Marine combat group. But after six weeks in gunnery school, I was swept up in the mandatory rotation and returned to Camp LeJeune in North Carolina. I had been made an instructor in machine gun tactics.

My heart sank. There appeared now to be only one way left open to me—flying! The war was in full swing. The Mariannas campaign was on. We were still a long way from the much talked-about invasion of Japan. The word had gone out that young officers were wanted for flight training.

Some months earlier, I had applied for flight training but with not much hope because I was an officer, and also because I was now more than twenty-four years of age, an old man compared with the eighteen- and nineteen-year-olds almost exclusively accepted for such training. But physically I felt that I could match the best of the teenagers and come out on top. Now I did everything possible to press my flight-training application, and finally in the summer of 1945 I received orders to report to flight school at Dallas, Texas. But shortly after I had begun flight training, the atomic bomb was dropped on Hiroshima and we knew that the war was all but over. And as soon as it was over, there was a mass exodus from the service. I had to make a decision: Go home with the others? Or stick it out, get my wings, and perhaps make a career as a Marine aviator?

Luckily, in flight training I had met my closest friend, John Skorich, also a Marine. I had first met John in the summer of 1940, when he and I had tried out for the Marine Corps rifle team. We liked each other instinctively and thereafter arranged to bunk together in the barracks. Whenever we were separated by duty, we maintained a relentless correspondence. We once had a joyous reunion in Iceland, after the ship on which he was being transported for duty in England had been torpedoed and the survivors were brought to Reykjavik. We had almost parallel personal backgrounds, and careers in the Marine Corps. We were about the same age. We both had received field commissions, and we both

had suffered frustrating experiences in attempting to obtain combat assignments. John, an intensely serious, strong, good-looking young man with genuine patriotic fervor, thought his world had collapsed when during the war, he was assigned to dress-blues duty as an embassy guard in London. But the truly low, ignominious point in his life came when shortly after he had received his field commission in 1943 he was assigned to train women Marines at Hunter College in New York. He finally got out of that and was assigned to a Marine detachment aboard the aircraft carrier *Franklin*. In the spring of 1945, the *Franklin* was kamikazied brutally by wave after wave of Japanese suicide pilots. Hundreds of sailors and Marines aboard the *Franklin* were killed. A sensitive man, John brooded over the experience for a long time. He wouldn't talk about it. Although we were like brothers and shared secrets, I had to learn from others that he had been decorated for his own unusual heroism aboard the *Franklin*.

Being able to discuss with John a decision about the future was an unexpected blessing. We came to the conclusion that there was a great and exciting future in military aviation. In flight training, both of us had found our expressions in life. From our first solo flight in a rudimentary light craft, we had been thrilled with flying. We decided to remain in the Marine Corps and later, after passing college equivalency examinations, we passed the necessary tests and interviews for permanent commissions.

During flight training and afterward, our careers continued to run parallel. We went together through flight training schools at Dallas, Corpus Christi, Pensacola, and Jacksonville. We lived together in bachelor officers quarters, went out together on dates, flew together, did aerial acrobatics and dogfighting together and generally enjoyed an intensive competition with each other. We received similar

assignments and similar promotions on almost identical dates, up until the rank of lieutenant-colonel, when John's career came to an abrupt end. It was the darkest day of my life.

I was on temporary duty at Marine Corps headquarters in Washington, D. C. It was shortly after five p.m., November 5, 1959. I was sitting alone in my apartment. A Marine Corps friend, Maj. Al Wilson, who had known John and I for years, telephoned.

"Hello, Bill. Have you heard about John Skorich?"

"No. What . . ."

Al broke in. "John just crashed and burned at McChord Air Force Base near Seattle."

I felt the blood drain from my face; I sat stunned, speechless.

How did it happen? I had to know the details. John was the most selfless, dedicated person I had ever known. If he could not have bailed out, it must have been something drastic, or something bigger than he. I was right, something bigger.

McChord Air Force Base is a major Military Air Transport Service terminal, where the large and airy lounge overlooking the field is often crowded with women and children, dependents of military personnel, awaiting transportation to or from a duty station. John had gone from Colorado Springs to McChord AFB in a jet to pick up a fellow Marine officer. They had a flame-out on takeoff and John turned left toward an open area, but sacrificed flying speed in an attempt to miss the MATS terminal. The plane stalled, crashed upside down, and burned. Too low to eject, John and his passenger were killed instantly.

We had often kidded each other about how, as aviators, each of us would end up. John always said that he didn't want to live to be a useless old man and that if he had to go he'd rather it be in some dramatic—quick!—fashion. Now he had had his wish.

But what and how to tell young, sweet, lovely Pat, the girl he had married, and had left behind with a little son at Air Defense Command headquarters in Colorado Springs? I knew Pat hadn't been informed yet. The information about John had come in to Marine Corps Headquarters over a special "hot wire."

Over and over in my mind I had composed the words: *Tell her quickly; no. First ask her whether she had heard anything; no. Start by telling her there had been an accident, and John was brave and he had made the only choice . . . no! Ask Major Wilson to telephone her right away . . . that's it . . . no! I must do it myself. I'm John's best friend; I've known them both and had been fond of Pat ever since John had introduced her. . .* Then I realized that she would be informed through channels.

I looked at my watch and suddenly realized that I had been deliberating for nearly half an hour. Just then the telephone rang. It was Pat. She had just been notified. I had to fight back the tears. I knew that now she needed someone she could rely on to help her arrange things for John and close out her affairs in Colorado Springs.

Traditional Marine Corps compassion for a buddy cut normal chain-of-command delays and within hours I was in an airliner officially on my way, assigned to assist Pat. Having known him my entire adult life, I felt that John would have liked a full dress military funeral and to be buried in the national cemetery of a city we had both grown to love, San Diego. Pat agreed and seemed profoundly relieved that I would take care of all the details. Her own family was in California and John's was scattered in several states.

I went to San Diego to arrange for his body to be shipped to a military chapel there and for an honor guard and a firing party. Then I went out to the Fort Rosecranz National Cemetery to select a suitable

plot. At the cemetery, I walked up to a picturesque bit of high ground, Point Loma, which sweeps out into the Pacific and from which John and I had often watched huge naval carriers at anchor in the bay. We had loved aviation so much that just sitting quietly and studying the airplanes on the carrier decks was one of the pleasures we shared.

Just as I had chosen John's plot on Point Loma and had turned to go, a huge naval carrier, its decks lined with airplanes, steamed by. It could not have been more bitterly heartbreaking if it had planned it that way.

The day of the funeral I rode to the cemetery in the hearse. The funeral ended in a manner befitting a dedicated pilot: just as the last note of taps sounded, a flight of jets from a nearby field blasted off in afterburner, and streaked across the sky. Someday, when young John is old enough, I shall tell him what a man his father was.

Chapter 4

To Serve with Advantage

ON THE DAY I RECEIVED my wings at Pensacola, in September, 1946, the Navy's famed carrier warfare expert, Admiral J. J. "Jocko" Clark, the "fightingest Admiral in the Pacific," had been invited to preside and award the diplomas. As they called off the names, a steady parade of youngsters went smoothly through the wings-handshake-diploma ritual. Admiral Clark barely paused. But when I marched up, he suddenly looked at my captain's bars, looked quizzically at my face, and said, "How on earth did *you* get in here!"

It had been the same throughout flight training. Most military and naval personnel expressed surprise to seen an "old man" taking flight training. True, I had been in flight school while barely under the age ceiling for aviation cadets; but I think to most people I looked older because—as I often have been told—I have a somewhat oblique face, a square "sternly set" jaw, and sharp blue eyes which combine to give me a more mature appearance. But the question that had been fired at me with monotonous (sometimes irksome) regularity was: What's a *Marine* captain doing in a *Navy* flying school?

Nearly everyone, of course, thought that there were (at that time) such things as an Army Air Corps, a Navy Air Corps, and a Marine Air Corps. But they were wrong; there was not and never has

been a Marine Air Corps. It is simply *Marine Aviation;* we are all in the same Corps.

A little history is enlightening.

Even since ancient times, "marines"—by a variety of names (*Epibatae*, to the Athenians)*—have been employed by navies as fighting specialists, defending the decks, wading ashore into combat .Prior to our Revolutionary War, the various Colonies had supported their own respective navies, and marines. For all practical purposes (now officially recognized) the United States Marine Corps was born by Act of Congress, November 10, 1775; the law had authorized the formation of "two battalions of Marines" who were to be "good seamen or so acquainted with maritime affairs as to be able to serve with advantage by sea when required . . ."

After a troublesome and nebulous existence regarding its control, the Marine Corps, in 1834, was ordered to place itself under the jurisdiction of the Navy. Today, the Commandant of the Marine Corps is directly responsible to the Secretary of the Navy.

The Navy had begun to experiment with flying during 1911. The next year, the first Marine, Lt. A. A. Cunningham, was assigned to aviation duty with the Navy, thus marking the birth of Marine Aviation. Today, all Marine Aviators are graduates of the Navy flight school, and are designated Naval aviators upon completion.

After graduation, the similarities vanish. To begin with, while Marine aviation started shortly after the Navy organized its own air arm in 1911, we have developed our own traditions and post-graduate training techniques. A Marine aviator is first and foremost

* Pierce, Philip N. and Hough, Frank O., *The Compact History of the United States Marine Corps,* New York: Hawthorn Books, 1960, p. 1.

a Marine officer, then a Naval aviator. If he has not already had basic Marine officer training, he will be sent to officers' school at Quantico, Virginia. Consequently, any Marine aviator may be called upon to lead troops in battle, administer a personnel office, take over a supply office, or command a fighter squadron based on land or on an aircraft carrier.

However, with its own aviation, the modern Marine Corps is more than a force in readiness. It is also a *balanced* force. Whenever a Marine division goes into action, it can count on the support of its own partners in the air, partners who can look down from the air, size up a battle situation quickly, and zoom down to give them what we call "close air support." In addition, a Marine ground officer, unlike an Army commander, can always plan his tactics without worrying whether he will obtain the necessary air support, or whether after having obtained it the support won't suddenly be taken from him for some other purpose.

Hence, every Marine division has its own air wing. A wing may have two or more air groups, and each air group is balanced for combat, that is, will have some fighter squadrons, some attack squadrons, and so on.

The principal mission of Marine aviation is to support the action of its ground forces in any manner—whether gaining and keeping air superiority with its own fighter planes, providing close air support with attack squadrons, or landing and rescuing with helicopters. During World War II, the Marine Corps made intensive use of close air support. In Korea, as I was to learn, we had shaped, polished and refined it to a precise art.

I remember when we had received what I thought was a rather unusual compliment for our proficiency in this art. I had been walking down a busy street in Tokyo, while on leave during the Korean conflict, when suddenly a high ranking Army officer rushed

up to me, grabbed my hand, pumped it violently, and said: "You're a Marine flier. Good, good, good. You guys and your close air support are great. Great! Why, you know, just the other day I was standing in a foxhole and I saw you guys coming in so close I thought you were going to take my helmet off. Great stuff! Keep it up. Good luck." I thanked him—in behalf of the Marine Corps. Then I watched him walk down the street, shaking his head as if still disbelieving what he had seen in Korea. We always enjoyed flying close air support for the Army when possible.

In close air support, we do not speak merely of dropping bombs or firing rockets to halt an enemy convoy. Our art depends primarily on dropping bombs and firing rockets and machine guns at the enemy, so close to our own troops, that the Marine aviator is virtually an extension of the infantry. In Korea, I have dropped napalm (pronounced *nay-pom*) bombs so close to our own ground forces that the forward air controller would call me on the radio to tell me that he had to take cover from the heat.

The *sine qua non* of the art is the speed with which the aviator can work with the forward air controller. In all cases, the forward air controller, who operates with the troops on the ground, is also a Marine aviator. With each other, via radio, we can speak the language of the air or ground. We can think fast and act fast and precisely. Many times in Korea I flew close support without using a map. I did not need them. Like an infantry officer, I knew the ground action well. I knew every little ridge line, every stream bed, hills, foxholes, frontlines, and could even tell whether an area had been recently raked by artillery fire by noting the condition of foliage. This is the result of watching the ground action develop day by day.

After I received my wings, I took advance fighter training in the F4U, *Corsair,* the famed World War II airplane with "seagull" wings; then came an assignment to a fighter squadron at the El Toro, California, Marine Air Station, followed by training in amphibious warfare at Quantico, where I was promoted to major in 1949.

In June, 1950, having completed my Quantico tour, I was in New York City when the Korean war broke in the headlines. I knew that the Marines soon would be in it in force. I immediately called an officer I knew at assignment headquarters and asked him, since I was in transient status, whether he could obtain a fighter squadron billet for me on the West Coast. I was confident that by being on the West Coast, if a Marine aviation squadron were to be sent to Korea, I'd be with it. Instead I was assigned to an air group operations office at Cherry Point, North Carolina. A desk job!

When I asked my commanding officer at Cherry Point whether there was any chance of my getting to Korea, he smiled. "Why, sure, Bill. A good chance, if you can fly a desk out there. Sorry, but we need you in group operations here."

I think by this time my trouble was that I had been acquiring something of a reputation as an "organization man," that is, being a stickler for efficiency, planning, and pride of achievement. This is not to say that I went around counting paper clips or making time-and-motion studies. It was perhaps quite the contrary. I was and still am a no-nonsense man. I like to organize any and all chores—whether it's sweeping out a hangar or planning a flight—so that whatever is most important will not be overlooked; so that nothing is lost, nothing wasted, nobody hurt or killed on account of negligence; so that some petty, querulous ass does not invoke a technicality to make a puny authority seem Almighty. I

prefer action over supercaution, especially if the latter is generated by fear of making a mistake. I prefer common sense and a little daring over red tape.

I recall one occasion, when, as a squadron commander in Cuba, I had made meticulous preparations to see that my pilots were fed a proper, balanced diet, in which I felt it was important to include many proteins and *fresh* foods, such as fruit, eggs, milk, and cheese. I had arranged, in fact, for such foods to be specially flown down from the States for my men and had passed strict orders that these items were to be on the breakfast table every morning, without fail. But one morning when I walked into the mess hall prior to a dawn flight, I noticed my pilots were getting everything except the foods flown down for them.

Walking up to one of the enlisted men, I asked, "Where are the fresh foods? Where's the milk and the eggs and cheese?

"In the icebox, sir," he replied.

"Why aren't they on the table?" I demanded.

"The icebox is locked, sir."

"Who's got the key?"

"The mess sergeant, sir. He's the only one's allowed to hold the key and he's not in yet."

"Where's the icebox?"

"Back there, sir." He pointed to a huge locker-type door in the kitchen. By now all the pilots and over a dozen enlisted men were watching me intently. What was the skipper going to do now? I reached for a huge cleaver, strode over to the icebox and chopped the lock off its hasp. I turned to the cook, handed him the cleaver and said, "Get that food on the table. And tell the mess sergeant to requisition another lock and from now on be sure that fresh food is on the table at every meal, or have lots of keys around." If looks were applause I think the ad-

miring glances of my pilots would have resounded thunderously. I was proud of them and I knew little shortcuts like this convinced them I would tolerate no nonsense where their welfare was at stake.

I had the same military viewpoint when I reported in for the desk job at Cherry Point. But by then I had also learned that the quickest way to get a more desirable assignment in the Marine Corps is to perform *all* chores, however unpalatable to your personal desires, with maximum ability, without griping. I did my best at Cherry Point and was moderate about letting it be known that I'd much rather be in a fighter squadron, fighting in Korea.

This approach has since served me well on a number of occasions important to me, as it did at Cherry Point, where it enabled me to acquire other flight proficiencies, which I felt would make it inevitable that I'd get assigned to a squadron in Korea. I had gone to Corpus Christi to pick up some advanced techniques of all-weather fighter flying; then back to Cherry Point and by June, 1951, I had received my transfer to the West Coast, where I knew it would not be long before I'd be in Korea.

In July, I was on my way to join VMF 212, a Marine fighter squadron assigned "to serve with advantage"—mainly close air support for the 1st Marine Division.

Chapter 5

Action in Korea

I WAS LUCKY. I HAD arrived in Korea in July, 1951, went into action almost immediately, and after more than fifty intensive close air support missions with Squadron 212, I hadn't received a scratch; although I had returned to my base a number of times with my *Corsair* shot up. My log book shows that on one occasion, after I had landed, the crew counted 132 holes in my plane. For the first—and I hope last—time, my good fortune made me feel a little cocky.

Actually I do not believe in luck, whatever that might be, as much as I believe a good aviator is duty-bound to acquire proper skills through sedulous training and then to make the most of his talents by keeping physically fit. Accordingly, after I had heard that one of my buddies, Lt. Tom Horgan, had been shot down and was in the hospital, I went to visit him. At his bedside, we talked about the situation he had been in and what he might have done at the time to avoid getting hit. We ended, as I had anticipated, in a hot but good natured debate on tactics. Repeatedly emphasizing my point, I said: "Tom, if you were a good tactician you wouldn't have been hit. You wouldn't have had to bail out. You wouldn't be here, flat on your back. Your tactics were wrong. Poor, poor tactics, that's all!

The next time I saw Tom I could wish only that I had kept my big mouth shut.

We had been flying from a field at a base known as K-3. (Most of us had found it easier to articulate designation numbers rather than Korean place names.) K-3 was on the eastern coast of Korea, not far from Pohang-Dong. Our field was near a lovely beach where most of us went swimming when off duty.

I was the squadron's operations officer. Among other things, this meant I was in charge of flight schedules and flight training. While we were always available for special sorties in behalf of the 1st Division, we also—whenever the weather was, as we pilots say "loud and clear"—flew close air support missions routinely, did a lot of armed reconnaissance hops, and looked for "targets of opportunity."

When I rose with the normal reveille at 5:30 on the morning of September 5, 1951, a few days after my visit to Tom, I was pleased to note that the weather was unusually loud and clear. A perfect, cloudless bright day for a routine close air support mission.

I use the word "pleased" advisedly. I could also say I was happy. Frankly, I enjoyed flying and fighting. I am, and I say this unashamedly, an old-fashioned patriot. I believe there is no higher honor for a man than to have the privilege of fighting for the land and the freedom he deeply loves. Perhaps some of the patriotic passion of my good friend John Skorich had rubbed off on me, but the fact that I had been able to fight for my country while doing the one and only thing I have ever loved, flying, added zest and bounce to my life; in Korea, the bounce was never higher than on a loud and clear day.

After breakfast on this day, I led my flight to the intelligence shack where, along with other flights scheduled for the day, we were to receive a general briefing. The briefing room was like a little theatre.

In front of a map-covered wall there was a platform, like a small stage, and we pilots sat in tight rows of folding chairs, looking down from a slightly elevated bleacher section. Sometimes we'd sit in the bleachers to get a briefing, even if we weren't scheduled for flight, in order to keep ourselves intimately familiar with general battle conditions. Hence, when the briefing officer talked about such now-historic battlegrounds as the Punch Bowl, or Pork Chop Hill, we could follow his reports over ground we had learned to know as well as the proverbial palms of our hands. On routine close air support missions, such as the one we were to fly this day, many of us never bothered taking maps along, and the briefing officer seldom found it necessary to repeat the general situation.

On this occasion, the briefing officer began briskly, and to the point:

"Good morning, gentlemen. You all know where the frontlines are. The general situation remains the same. However, during the night we received reports that the 1st Marine Division, on its left flank, just south of the Punch Bowl, has suffered heavy casualties resulting from new and as yet undiscovered artillery fire. Go up there and see what you can do for them.

"When you get there call the Air Control Center. They will give you specific missions. Before you go, however, I want to point out that apparently some new, light automatic anti-aircraft weapons have been moved in by the enemy. We have reports of heavy flak, indicated by these red dots."

He turned, pointing to the map. The section into which we were to fly had been practically plastered with red dots. Then the briefing officer gave us the latest shackle code, which is something like a password. On more than one occasion, the Korean and Chinese Reds, having learned our close air sup-

port techniques, would contact us on the radio and try to trick us into bombing or strafing our own lines, or get us into their own line of fire in order to shoot us down. Since most of us, in combat, found it expeditious to dispense with rule-book radio communications, we would invoke the shackle code whenever there was any doubt about the voice at the other end of the radio.

Whenever the deception was tried on me, I'd boil with anger. I recall an incident involving a Korean Red who spoke almost perfect English and was pretty good at American colloquial. He almost had me fooled. But there was something about the way he spoke that alerted me. Apparently trying to get me into his line of fire, he'd say, "I need you here. Come on over here." But he never quite pinpointed his position. I used the shackle code. "Authenticate *Delta November,*" I said.

"What was that?" he asked in a nasal voice.

"Authenticate *Delta November!*"

"I don't quite understand you," he said.

"You're quite right, you don't understand me! If I could see you, I'd give you something to understand." Unfortunately, I couldn't find him.

After the briefing officer had given us the shackle code for this day, I took my boys to the squadron ready-room, where I gave them last-minute instructions.

"Let's make it snappy," I said. "There may be lots of work for us today. We'll proceed as follows:

"As soon as I get airborne, I'll make the turnout over the bay and we'll rendezvous in a left-hand climbing turn. We'll fly the heavy-side left formation, *Devilcat Three* and *Devilcat Four* on my left, *Devilcat Two* on my right." This was a loose tactical formation which I favored because it made it unnecessary to fight the controls, as in a tight formation,

while flying to the target area. I liked my men to feel a little relaxed before the strain of combat.

We followed the coastline to our target, about 150 miles north, and as we closed in I ordered the men to form an "easy column," one behind the other, loosely, a kind of aerial Indian file with about 500 feet between planes. Then I called the air control center.

"*Devastate Baker,* this is *Devilcat One.* I am approaching your area from the South. I am a flight of four. My load is *Cadillac.*" *Cadillac* was another code word to signify the type of armament we were carrying.

Devastate Baker replied immediately. "Roger, boy. Glad to have you up here. We sure need you this morning."

"Glad to be aboard," I said. "Got any good targets for us?"

"We sure have. Proceed to the reservoir area and give *Playboy One-Four* a call. He'll put you to work." Playboy was my forward air controller.

"Wilco and out."

We switched to a pre-assigned frequency for communication with *Playboy One-Four* and went over to his area. As soon as I called him on the radio, he said excitedly, "Boy, oh boy, am I glad to see you. I've been telling these guys all night, just wait till I get some aircraft up here against that artillery. We'll clobber 'em." Then he settled down to a more businesslike voice. "I have you in sight now," he said.

"Pick up a left hand orbit. Look to the northwest, about 8,000 yards. You'll see a high, long ridge line. It's about 2,000 feet high. You'll notice that it runs generally from northwest to southeast. Behind the ridge line is where we think there's some enemy artillery. They've been giving us hell all night. We've got our own artillery but we've been unable to get

at them because they appear to be firing from a defilade position.

"Sorry, I can't give you much more than that. See what you can do." His last words were almost plaintive. I had sensed that this group had suffered considerable casualties.

"Wilco," I replied. "Stand by. We'll go up and take a look."

By now, the enemy had been lobbing some small arms and light anti-aircraft fire at us but we were at a sufficient altitude not to be concerned about it. Nonetheless, on our way over to the target area we flew evasively, zigzagging and changing our altitude to prevent their getting a fix on us. The tactic was routine, but some pilots tend to forget it in the heat of combat.

Soon, I saw the long, high ridge line and could see from the newly burned foliage in the area that there undoubtedly had been a great deal of artillery fire, not from our side. I noticed, too, that there was another long ridge line which ran almost parallel to the one *Playboy One-Four* had mentioned, and both ridge lines formed a modified V-shaped canyon, about 100 yards long. If I were a foot soldier, I would not have relished being trapped in that canyon with enemy aircraft overhead. But that was exactly what I had had in mind for the enemy if they were in the canyon, trapping them and raking them with strafing runs, after burning them out of their concealed gun emplacements.

As I came around on an easy turn, keeping my eyes on the wooded areas in the canyon, I saw two huge puffs of blackish-gray smoke. Muzzle blasts. No doubt about it. I had seen enough artillery fire to recognize the characteristic puffs. I get a strange feeling when I spot stationary targets. I know they are at my mercy. I want to move in for the kill, get it over with fast.

I gave *Playboy One-Four* the approximate position of the suspected artillery positions, in order that he might locate them on his map and pass the word for our artillery to zero in on the targets.

"Go get 'em," *Playboy One-Four* shouted. "I wish I were up there with you."

I called my boys. "O.K. You saw them. Down there at the base of the southern ridge. We'll burn them out and work them over. Let's move in for a napalm run. We'll make the run paralleling the ridge line northwest to southeast and pull out to the right."

I had ordered the right-hand pullout because in that way if any of us were to get hit, we'd at least be closer to our lines in the event of a bailout. As it turned out, I was to benefit personally from this tactic.

I received three rapid "rogers" from my flight. They followed me up to about 8,000 feet and into position for the napalm run. Then I gave final instructions. "I'm going to drop my bomb just at the edge of the woods. Each of you try to drop yours about fifty yards longer than mine. O.K. This is *Devilcat One*—going in!"

I went in very low, picking up speed, and just as I reached the edge of the woods I "pickled," pressed the bomb release button on my control stick. I pulled up abruptly to the right and, looking down, could see my bomb land close to the edge of the woods; and then I could see *Devilcat Two*'s bomb land beyond mine, as planned. We were a team. I smiled proudly, and I chuckled as I thought of those Marine infantrymen who often called us "flyboys" and "airdales"; but now they needed us and we were coming through for them. I could almost imagine them standing and cheering us on as we made our runs and they caught glimpses of the smoke and flames coming out of the woods set ablaze by our napalm bombs.

Just as I came around to make my second run, I could see the entire wooded area on fire and hundreds of men running, like confused ants, some with their clothes flaming. They all seemed to be running across the canyon floor toward another, smaller wooded area at the other end of the canyon, as if attempting to take cover on the other side.

I called the flight. "This is *Devilcat One*. Let them get into that other wooded area. We each have another napalm bomb. Repeat the treatment."

But this time as we made our second bombing run, I could see a greater concentration of streaming tracer bullets and round white puffs of smoke all about us. Apparently, they had anticipated a close air support mission from our side and had placed anti-aircraft guns on the ridge lines. Now the anti-aircraft fire was coming at us from both sides, but with both wooded areas burning and enemy troops racing toward the mouth of the canyon to escape, we continued making runs, firing our rockets and 20mm wing guns. We were chasing them up and down the canyon. Meanwhile, I had called *Playboy One-Four* to give him a blow-by-blow account of what was happening. "Good, great," he cried. "We'll zero in and send some stuff over."

In a few minutes, the entire floor of the valley was a veritable mosaic of erupting volcanoes as shell after shell from our artillery poured into the canyon, shooting dark geysers of earth and men and battered guns into the air. It was mass firing. Perhaps every artillery gun in the division had been given the target position.

Playboy One-Four called back. "How's that? Are we getting 'em in there?"

"You're doing fine," I said. "Keep it up."

By now the wooded areas had been completely burned away, and *Playboy One-Four* had asked me to count the number of enemy artillery pieces that

had been exposed. I made a low pass down and went in below the ridge lines to obtain a count. Just then I saw what appeared to be a 50 Cal. machine gun firing at me from one of the ridges. I saw a few tracer bullets go by and was about to pull up to a higher altitude when I felt as if my plane had been jolted. I knew immediately what the jolt meant. I had been hit. I went into a sharp climb and saw smoke coming from the right side of my engine. I called *Devilcat Two.*

"This is *Devilcat One.* I've been hit. Join on me."

"Roger. I have you in sight," *Devilcat Two* replied calmly.

Then I told *Devilcat Three* to take command and at that moment I saw flames creeping into the cockpit from behind the instrument panel. I could feel intense heat on my legs, as though they were on fire. Simultaneously, I started cranking open my canopy and called *Devilcat Two.* "I'm on fire. Oil pressure's gone. I'm bailing out."

I was in a slight right bank and normally should have bailed out from the left side because the plane would then be going away from me. But with my plane on fire and explosion an imminent possibility, I just leaned over and took the fastest route out of the plane, over the right side. I didn't count as you're supposed to. I merely sensed the proper time to pull the rip cord and pulled it. When my 'chute opened, I felt an enormous sense of relief, even though it jolted me so hard I felt as if I had been hit in the teeth with a sledge hammer.

The peace and calm was uncanny. All of a sudden the sounds of war, of roaring engines, whining bullets, and exploding shells, disappeared. Floating down, it was unbelievably quiet, almost pastoral; and I was quite comfortable. Except for little puffs of white smoke coming off the canyon floor, it was difficult to believe that where one might expect to see

shepherds tending their flocks, men were killing and being killed. There was a gentle breeze, and hanging from the 'chute I oscillated barely enough to feel the sensation of movement. It was radically different from what I had expected my first bailout to be like. Except for some burns and a severely bruised eye, caused by the wind blast ripping the goggles from my face, I was feeling fine and had time to think carefully about my next move.

Below me, I could see a series of little ravines and tiny clusters of thickly wooded areas. I figured that I was about a mile or two from our lines and after touching down I would take cover in the ravines and wooded areas as I worked my way to safety. I was certain that the enemy had seen me bail out and would, therefore, send a patrol to either kill or capture me.

While floating down I felt safe. For one thing, *Devilcat Two* made wide, easy circles about me and would take steps to assist my rescue. I learned later he had scribbled a message on his knee-pad (*"Downed American pilot. Your area."*) and had dropped it over a friendly South Korean post nearby. I was not concerned about being shot down by enemy aircraft. We had enjoyed almost complete superiority of the air at most times. In fact, it was a source of considerable pique to us that the enemy would come out to fight us in the air only when the weather was impeccable and they were in a position to scoot back to the politically endowed sanctuary of Manchuria whenever it looked as though they were in danger of losing.

As I settled closer to the ground, over a patch of trees, suddenly there was nothing gentle about coming down. It looked as though the ground, with long, mean shafts jutting upward from a carpet of green, was rushing toward me at express-train pace. Anticipating the worst, I put one arm tightly about my

eyes, and instinctively covered my groin with the other. Fortunately, I landed between the trees and it was as gentle as if I had been merely pushed into an easy chair. My 'chute had tangled in a web of branches and this cushioned my landing. But I wasted no time counting my blessings.

I released myself from the 'chute and checked to see whether my jungle knife and my .38 Cal. revolver were still strapped to me. They were. As I began tugging at my 'chute to haul it down, not wanting to leave an easy marker for the enemy patrol that was sure to come at me, I heard a few shots and looked up and there they were, the patrol, heading for me. One of them appeared to be unusually tall and long-legged and was well ahead of the others. I wasn't too frightened. They were still perhaps 1,000 yards away and though they had paused now and then to shoot at me, the distance made their aim somewhat inaccurate. I was in excellent condition and was confident I could outrun and outlast any or all of them in a game of cat-and-mouse in the ravines and wooded areas. I felt momentarily pleased with myself and my ideas about physical conditioning.

Through my mind flashed an almost identical incident involving a fellow aviator, several years my junior, who had scoffed at keeping fit. He was captured while fleeing an enemy patrol simply because he had become winded from running and the patrol didn't even have to point a gun to take him. They found him exhausted, panting, lying on the ground and merely lifted him by the armpits and carried him off. When I saw him after the war, he had become a conscientious adherent to physical conditioning.

As the patrol closed on me, I ignored the 'chute, reached into my survival pack for a can of water, dashed into the woods toward a dry stream bed, then

up and down a series of ravines and through clusters of wooded areas. Sometimes I ran hard, sometimes easy, and sometimes I slowed to a fast walk. I was conserving my strength for a burst of energy if I should need it. Finally, after about an hour, I felt confident I had evaded the patrol and had comfortably out-distanced them. But suddenly I realized I was confronted with another dilemma and perhaps a more serious one. What if my own side did not recognize me and shot at me as I . . . But just then I had no time to ponder the problem and had to resume my flight. I heard voices and the sounds of running feet coming toward me through the underbrush. *That damned patrol had closed on me!* I could scarcely believe my ears. I cursed myself for having underestimated their ability and endurance. I spotted a narrow ditch, dove into it, and pulled some brush down over me as a camouflage. Shortly, I could hear them distinctly, jabbering excitedly among themselves. I felt that there were at least four or five of them, walking around me, shoving brush aside, peering into concealed depressions. I pulled the pistol out of my shoulder holster and thought "At least I'll get a few of them. . . ." But I also had hoped, prayerfully, that I would not have to fight my way out. Although I had been an expert marksman, I was not anxious to shoot it out against such odds. It would be perfect, I thought, if I could remain hidden until dark, then resume my escape in the protection of night. But as I lay there I could hear the voices getting closer and closer, and I could make out Korean words and then, abruptly, through the branches, I saw the face of a Korean soldier. He didn't see me, yet. I didn't dare shoot him, lest the others come running at the sound. I replaced the revolver, took out my jungle knife and was just about to lunge for his throat when the bushes partedly suddenly and there they were—half a dozen men, their guns with

fixed bayonets pointed down at me. After a few interminable seconds of tense silence, I burst into laughter. I could see the emblems on their helmets. They were *South* Koreans! All were grinning broadly. "Friends!" I shouted, and they reached down to help me up.

Then began a series of incidents which were almost comic-opera commentaries on the grimness of war. At ROK (Republic of Korea) headquarters, stripped to my undershorts and a can of beer in my hand, I stood chatting casually with some ROK soldiers while a diminutive but genial medical corpsman swabbed my bruises with bright orangey merthiolate. The little brown-skinned man with dark, flashing eyes seemed to revel in painting me like an Indian at a ceremonial war dance. He swabbed every little bruise on my body, even where there was only a suspicion of a scratch. I didn't dare protest. Swab and bottle in hand, he was an intense artist at work.

But suddenly a Korean soldier stuck his head into the tent, shouted some command, and everyone around me snapped stiffly to attention, including the corpsman, holding the swab and bottle as if they were his weapons at "present arms!" Outside the tent, I could see the reason for the fuss and excitement. He was a short, rotund ROK brigadier-general with a huge round head and massive jowls, almost a caricature out of Gilbert and Sullivan. On his head was a helmet several sizes too small, with a tremendous white star painted across the entire front, the whole ensemble polished and lacquered to a perfect brilliance. As he waddled toward the tent I could almost hear the boom-boom-boom of an off-stage bass drum heralding his arrival; and perfectly orchestrated to all this pomp and ceremony was his helmet, which, perched precariously as it was, like a half

walnut shell on a cannonball, rocked from side to side, alternating with his waddle.

When at last he entered the tent with a flourish of his hands, as though to sweep everything and everyone to a respectable distance, I shifted awkwardly on my feet. I didn't know exactly what to do. Certainly, I was outranked and this man deserved a salute. But standing there as I was, bare-headed, bare-chested, bare-legged, in jockey shorts, a can of beer in my hand, smeared all over with merthiolate, I didn't dare move lest I do something insulting during this unseemly moment in military protocol. But he remained a few moments only, exchanging amenities, and saying that he had come to pay his respects to me, to Americans, to aviators in general, and to the "brave men of the United States Marine Corps" in particular. He was sincere and I respected him for it and thanked him. But to me war is a wretched, hard business. While there may be humor in the relations between men who must fight in it, I could never stomach the ostentatiousness of rank, whether American or ROK. This just happened to be the funniest I had ever seen, and it became next to impossible for me to hold back a smile. I think the toothmarks from biting my tongue are still there.

In the business of war I also had considered that whatever I might do or fail to do, seemingly "heroic" or otherwise, should be seen in the light of a job that had to be done, and if done well to feel proud; if done poorly, to improve. I know that there must be medals and citations in war. It's the human way, I suppose; a matter of national, psychological necessity. I've always felt that if I were to receive an award in war I'd just as soon get it via the mails, put it in a drawer, and forget it. But the setting in which I had been informed that I was to be recommended for a medal for the mission of September 5,

also proved to be a touch of the burlesque in war, American-style.

It was a few days after I had returned to K-3. I was engaged in what was known as a "fighter pilot's douche"—taking a bath in a rainbarrel. Standing naked in the barrel—my head fully lathered, a beer can full of water poised to pour over my head—I noticed a high ranking Marine Corps officer striding toward me. I might have saluted if I could have done so without drowning, but I merely stood there, ill at ease, while he came to deliver his little speech about what a "terrific job" I had done on the mission of September 5. He said the intelligence reports had just come in and disclosed that we had killed more than seventy of the enemy and had wiped out their entire battery of guns. Then he leaned over and whispered, as if to let me in on a military secret, "Don't tell anyone I said so, but I think you're going to be recommended for something big for this job. In fact, I'm sure you'll get it."

I didn't exactly feel like laughing, but it struck me as funny that he could not have chosen a more decorous setting and appropriate time to convey the news. At any rate, he plainly wanted to carry on a lengthy conversation about the mission of September 5, but I evaded the subject. I was trying to impress him with my own feeling that it was really nothing, just another routine mission. I meant it, too. I have no false modesty. Besides, the soap was getting in my eyes. Finally, he got the message and departed.

However, I was overjoyed at the news he had brought. I did not know that the "something big" he had referred to was the Distinguished Flying Cross, which I was to receive at a colorful ceremony upon my return to the States. He left me with the impression that I was to receive command of a squadron.

Something had happened to me since that first tremendous thrill I had felt at becoming a fighter

pilot. It was no longer enough to fly, to fight. I had developed some ideas and theories of my own—on how to organize a squadron, how to train pilots and grounds crews, how to improve efficiency and performance and get hundreds of men to live, work and play as a team. I felt that if I were to obtain command of a squadron—meet its fresh challenge, successfully implementing my ideas—it would, for me, represent the finest hour of my life and thereafter everything else would be anti-climactic. In fact, all my flying buddies in Korea used to say that the only thing I lived for was a squadron command. Hence, it was somewhat frustrating for me, during the remainder of the Korean war, to find that every time a squadron command was assigned, or rumors thereof were afloat, I was left in drydock. My name never even was launched into the scuttlebutt.

However, to me the most appropriate denouement of the September 5 mission came a couple of weeks later. During the bailout, I had apparently wrenched my back more severely than I had thought. At first, I had felt some pain but not enough to complain about. One morning, however, I awoke barely able to move. Getting out of bed was extremely difficult and painful. The doctors wisely had decided to send me to the hospital for observation, although I had protested—back injuries being difficult to diagnose, I was afraid that the doctors would invoke the rule of caution and ground me.

They insisted that I go to the hospital flat on my back in a rolling stretcher. I yielded to their orders—and was sorry for it. I was wheeled into a large two-bed room in the hospital and just as the corpsmen were slipping me from the stretcher into the bed, the other patient, also flat on his back, turned and our eyes met. I felt like shrinking under the covers. The other man was Lt. Tom Horgan.

"Well! Well! *Well!*" he crowed; "if it isn't the big tactician himself! Welcome to the fraternity."

Chapter 6

Devilcat to Fearless to Surgery

AS A MATTER OF policy, one Marine fighter squadron of the Wing was aboard an aircraft carrier at all times, and each squadron took turns in going aboard. Although by now more than sixty combat missions had been entered in my logbook, I was elated to still be in Korea when Squadron 212 was ordered aboard the carrier *Rendova* in October, 1951. I was also happy to have been discharged from the hospital feeling as fit as ever.

I had always enjoyed carrier flying—largely because it is a more difficult and challenging type of flying. In carrier takeoffs and landings there is little room for error. That is why aboard a carrier, for example, there is a specialist known as the LSO, landing signal officer, who has the extremely delicate and responsible task of guiding pilots in to safe landings. (There now is a system used employing lights, but an LSO is still on hand for emergencies.) By means of radio-voice and hand signals, the LSO helps the pilot hit the deck at an exact spot in order that the plane's tail hook can catch a wire, which in effect "traps" the plane, brakes its speed, and prevents it from going off the other end of the deck. I have seen LSOs deliberately cause a wounded or otherwise disabled pilot to crash onto the deck, or even into a side bulkhead, rather than let the pilot overfly or underfly, and crash into the sea. Consequently, a

carrier pilot must employ his best skills and sharpest wits at all times. It was aboard the *Rendova,* however, that I was to experience a landing while fighting to maintain consciousness, blood gushing from a deep wound in my leg.

In all, I had completed some forty combat missions off the *Rendova,* and these were among the most exciting, most rewarding days of my life. I had had the good fortune to team up with three outstanding young men who were also bachelors and would rather fly and fight than eat. Between us there were enough contrasts to make the team interesting. One of them, Lt. Alonzo (Nobby) Norbaum, was a former football player from Los Angeles; he was rugged but easygoing. From Texas, there was Lt. Tabler, rough and aggressive; and from New England, Lt. Dupey, fittingly serious-minded, almost scholarly. By comparison, at thirty-one, I was the old man. The others were in their mid-twenties.

We continued flying close air support missions, but we also had many interdiction assignments, destroying enemy transport that moved by sea, road, air, or rail. Our team had become rather expert in knocking out truck convoys and bridges. We had developed a particular enthusiasm for Korean roads because they were so delectably narrow; in coming across a Communist truck convoy, we'd concentrate on knocking out the first and last truck in the convoy. The remaining trucks, trapped on the narrow road, could then be thoroughly worked over. Rockets and machine guns blazing away relentlessly, we'd work the convoy up and down until the trucks burst into flames and exploded like a series of Roman candles nailed to a long plank.

In bridge work we had become experts par excellence and were fiercely proud of it. We generated a competitive spirit for bridge assignments, causing us and others, including ordinary seamen aboard

ship, to maintain "batting records," such as how many bridges hit, how many destroyed, number of hits per load. On more than one occasion, our team, carrying two bombs each, got five hits out of eight; and we considered that big league batting.

Whenever there was a particularly difficult bridge mission, perhaps calling for the highly vulnerable technique of relatively slow, low flying, our team would eagerly volunteer for the job. We also volunteered often for pre-dawn or early morning flights, which were not particularly relished by other pilots.

Once, we had volunteered to attack a dam that was virtually ringed by anti-aircraft guns of the very latest, highly accurate design. Our mission accomplished, dam destroyed (three direct hits out of six), we returned to the ship and a chief petty officer, seeing us together, rejoicing over our .500 batting average, cried out, "Well, here they come, the fearless four. Congratulations." Everyone laughed, but the name stuck. After that I was *Fearless One,* and the others were *Fearless Two, Three and Four.* We adopted *Fearless* as our aerial call signs and also addressed each other personally by our respective *Fearless* numbers.

On the day we were christened the *Fearless Four,* I had to review our job on the dam and in doing so suggested to the men that perhaps we had flown a bit too low. I said, "Now look you *Fearless,* next time let's have a little more fear and less gambling with our lives. Not so low."

Shortly after, *Fearless Two* remarked that he thought I was pressing my attacks too low, and if I wasn't careful, I'd be shot down again. The very next day he came tumbling out of the sky and had to crash land in the sea, a victim of ack-ack due to low pullout. I flew cover over him as he waved to me from his life raft. Several times I had to strafe enemy boats trying to get to him. *Fearless Two* and

Three escorted a helicopter to the scene, and had him picked up. He never said a word when we met aboard the carrier.

Whether aboard ship, or on a few days' leave in Tokyo, the *Fearless Four* were inseparable. Ashore, we forgot about flying and worked hard at having fun. Aboard ship, our bull sessions nearly always turned to discussions on flying and fighting, on fighter-plane tactics, on physical fitness, on training techniques, philosophies of leadership. I had always argued that if a man were a "born" leader he needn't boast of his talents nor exert himself to achieve leadership. In military aviation, I'd argue, it was more important for a pilot to concentrate on training, skills, maintaining and improving his proficiency, and keeping physically fit. (Of course, I did have a set of weights aboard the *Rendova* and worked out regularly with them on deck, until one day the weights disappeared. I had always suspected that a sailor, who somehow thought I was chipping the deck which he had to paint and otherwise keep clean, threw the weights over the side. But the disappearance of my weights became the standing joke aboard ship. Who threw *Fearless One's* weights overboard? I never did find out.

On questions of tactics and other flying problems, I had always been prepared to concede to what I felt were superior ideas. But on the subject of leadership, I was fairly adamant. It was, and has been my contention that under proper circumstances, a leader will always rise to the occasion, even when surrounded by others of equal or greater talents, provided the leader maintains his equilibrium, makes decisions on facts, fights panic, and remains the calm nucleus in a swirling storm. Before long, while on a *Fearless Four* "recon" mission, I had been thrust into a position to prove my theory.

It was, as usual, a pre-dawn launch for the *Fear-*

less Four, a routine reconnaissance of a river for the interdiction of cargo-carrying vessels, usually small river boats attempting to get by with supplies for enemy troops cut off from their truck-convoy routes. Prior to our launch, shortly after a four A.M. breakfast, we received the routine intelligence briefing. During the night, we were told, a dispatch had been received from a friendly band of Korean guerillas. It seems that there had been an unusual amount of enemy activity in the vicinity of Haeju, a large town bordering the Yellow Sea, just north of the notorious 38th parallel, the dividing line between North and South Korean zones of occupation. After completing the river "recon," the intelligence officer suggested, it might be worth looking over the Haeju area.

We had had better-than-average luck. It had snowed during the night; but now it was a crisp, clear morning and we could discern, on account of fresh tracks in the snow, considerable movement on the beaches and on roads adjoining the river. By following the tracks, we'd get such targets as trucks leaving small supply depots along the river or small enemy camps whose positions had been revealed in the fresh snow.

We were just returning from our target of opportunity hop, when suddenly I heard a shouting, frenetic voice on our radio channel: *Look at 'em go! Look at 'em go. God, there must be hundreds of 'em down there. They must have been changing li ιes during the night. With all that fresh snow, they can't hide. They're running around like crazy. We got 'em, we got 'em!*

It sounded like one of the boys from my squadron. I cut in, "This is *Fearless One.* Who's that? What's going on, and where?"

The same excited voice answered, without identification, "It looks like we've got a whole battalion of 'em. Nobody's leading 'em. They're going crazy.

Come on over." He gave the position. It was near Haeju, about thirty-five miles from where we were. I ordered the *Fearless Four* flight into the position, at full power, and we were there in minutes. By then the air over the position was filled with another four-plane flight from Squadron 212 and perhaps a score of other fighter planes, apparently Navy and Air Force men who had heard the same radio invitation and decided to join up. Before long, it was almost like an aerial circus. Everyone, it seemed, was trying to talk at the same time on the radio and attack from every imaginable position. It was hectic, inefficient, dangerous. I pressed my mike button and spoke firmly. "All aircraft in the Haeju area. This is *Fearless One*. Squadron 212, flight of four. We've got a real good target here. Let's get organized. I'm over the target, at 10,000 feet. Let's work them over methodically. Let's break into individual flights and establish a traffic pattern." Then I advised each flight leader to take his flight to an assigned altitude and await instructions. During the attack, I remained at my altitude, acting as a tactical air coordinator and, meanwhile, had called the tactical air control center at Seoul, suggesting that this unusually large target be kept under attack as long as possible; and then I called the *Rendova* to suggest that every possible plane be launched. All morning, planes kept coming from every direction. It was, from the air, an incredibly ghastly sight. Some of the Communist troops were apparently so fanatically disciplined that they refused to break ranks and run for cover. It was almost as if they were determined to show us they were not afraid. We'd make strafing runs on them and they'd go down like rows of tin soldiers and when the napalm bombs hit it was sickening to see clusters of human forms curling up like black, burning mounds of paper. We established a pattern and each flight leader controlled his flight, employing

the tactics and techniques best suited to his type of plane and ordnance. The other flights circled and awaited their turns. As each flight finished, the leader would inform me that he was leaving the target area. It was as smooth and orderly as working on a bombing range in the States.

Later, from the same friendly guerilla forces, our intelligence officers learned that we had destroyed a considerable amount of supplies, vehicles, and buildings and more than 700 of the enemy had been killed. Now, whenever I am in a bull session on leadership in military aviation, and someone wisecracks that it's all well and good to talk calmly in the comfort of an easy chair, but it's different when you're up there and there's pandemonium in the air, I think of a neatly typed piece of paper which starts off, "In the name of the President of the United States, a Gold Star in lieu of the second Distinguished Flying Cross to Major William H. Rankin . . ." The Haeju target of opportunity remains one of my most unforgettable experiences.

By December, 1951, each of us in *Fearless Four* had long since passed the number of missions required for rotation. But we volunteered to remain, and I think I would have lasted many more missions had I not been wounded while out on a bridge mission.

There were many bridges on the enemy's main supply route, ranging from the Yalu River in the north through Pyongyang, the North Korean capital, south to the 38th parallel. Most of these bridges were small, difficult targets from the air. (Each of the bridges, some rather ancient and colorful, had a name; and it was from one of these names, Toko-Ri, that author James Michener derived the title for his best-seller.)

The *Fearless Four* technique in destroying bridges was to drop a few well-aimed bombs underneath, to

break it in half if it were a low bridge, as most were. The bombs, of course, were delayed action so we would not be knocked down by the blast. That is why we frequently had to fly lower than usual, lower than ordinary prudence might demand. But we had never considered the bridge missions ordinary. The word had come in that the "bridges at Toko-Ri" were now vital to the enemy's main supply route. We were to knock them out and keep them out. But the enemy had developed an uncanny knack for repairing bridges. Often, after a direct hit, in which the center of the bridge would collapse, leaving either end hanging precariously in the water, we'd return the following day and find that the ingenious enemy had merely placed huge, thick planks across the gap, as though the ends were made-to-order foundations. It proved annoying, sometimes embarrassing. We'd return from a mission, reporting a bridge knocked out, and a day or two later the bridge would be in use again. The intelligence officer would call us in. "I thought you said you destroyed that bridge yesterday," he'd say. And I'd reply, "Of course. We saw it go down. It was lying in the water when we left."

"Well," he'd say, giving us that cold, fish-eye look of skepticism, "it's not down in the water now. Take a look at this. Just came in." And he'd show us an aerial photograph of the bridge, enemy troops or trucks moving across it.

It was after one such embarrassing intelligence session that the *Fearless Four* took off to check a few bridges we had hit. But by now the bridges had become so important to the enemy that they had ringed many of them with their best anti-aircraft guns and flying low became increasingly hazardous. However, after we had arrived over a bridge that I was certain we had completely destroyed only a couple of days before, I was stunned to see the bridge intact, almost as if it had never been touched. I was determined

to find out exactly what they had done to rebuild it so fast and flew down to an unusually low altitude, at relatively slow speed. Within seconds, anti-aircraft fire went off, so intensively that it seemed as though I had flown into a storm of raining shrapnel. From under me, above me, right and left of me, came the frightening characteristic concussions: crack-crack-crack, crack-crack-crack. Just as I thought, "Better pull out of this mess," I heard an exceptionally loud crack-CRACK! And before I knew it, my plane was on its back, at 1,000 feet, out of control. I felt a severe burning sensation in my right leg. Instinctively, I put hard right pressure on my control stick, went into a snap roll, nosed over, added full power to pick up speed, and zigzagged out of the area. As soon as the plane was under control, I reached for my right leg, high on the rear of the thigh, and my hand felt warm and sticky. I looked at my hand. It was covered with blood. I looked at my leg, straining to see the wound, but all I could see was blood almost pouring through a hole in my flight suit. I knew that I'd have to make a landing soon, or probably bleed to death.

I am normally calm in flight, even under emergency conditions, and I was not now perturbed by the sight of an ugly wound. I was only concerned with the problem of where to land: the carrier? or Seoul? I was about equi-distant between both, about 100 miles either way.

I looked the plane over quickly and saw that the right wing was damaged, there were several holes in the cockpit from shrapnel, and the engine seemed to be running rough. As we streaked out of enemy territory, I told *Fearless Two* that I had been hit and was bleeding badly. After a short discussion of my situation, I decided that to land on a field near Seoul would be dangerous—my leg was getting stiff and would be useless in a landing. The *Corsair* required

rudder on touchdown and roll out, while a carrier landing was complete once the tail hook caught the arresting wire. Also, I knew I would get immediate medical attention by a flight surgeon on the ship, and would be home with my squadron.

"Take over, *Fearless Two;* lead me back to the ship," I said, "and tell them we're coming in."

But I started feeling weak and dizzy, and was not certain at all that I'd even be conscious by the time we'd be at the ship and ready to land.

Fearless Two flew up close to me and kept me informed as to how I was doing. Occasionally, I'd give him my instrument readings so that he could check them against his instruments and thereby let me know whether I was seeing well. By the time I had approached the ship, ready for a landing, I felt extremely tired, sleepy, from the loss of blood. It was also beginning to feel as if my entire right side were paralyzed. But I was confident I could hold out long enough to get aboard. At intervals I reached for different objects to check my reflexes and coordination.

I was worried that my approach might not look good to the LSO and he would crash me on board. I called him on radio. "Look," I said, "I'm all right. So nothing fancy. Let me make the normal type of carrier approach I have always made."

"Roger," said the LSO, but somehow his voice was not convincing. But there was no time to bicker. I was only seconds away from touching down. At that moment, I thought I was coming in too high. What was the LSO up to? I pressed my mike button. "I'm high. I feel high. Don't . . ."

The LSO interrupted, "You look good, you look good. You're O.K. Come on in."

Now there was no alternative. He gave me the cut signal. I yanked the throttle back, dropped the nose, pulled back on the stick and could feel the wire take hold and knew I had made it.

In sick bay, I was given an injection and after the pain-killer took effect, I felt much better and the wound bothered me so little that the doctor allowed me to leave the sick bay. That evening, however, I received the best pain-killing medicine of all, joyous news. The commanding officer of Squadron 212, Lt. Col. Manuel Brilliant, was returning to the States and I was to assume command of the squadron. My dream had come true! What's a little wound! I could walk on my hands, float in the air, fly blindfolded—anything. Squadron commander, at last! The only major in the area to have a command!

But the next morning, as I awoke, I knew my dream bubble had burst. My leg, from the hip joint to the knee, had swelled to more than twice its normal size and had turned an ugly black and blue. Every time I tried to move my leg, I was in pain. The doctor said I'd have to return to the States for surgery. I pleaded with him to do anything at all to fix my leg. I told him I was going to remain with the squadron, at any cost! He was sympathetic and charitable enough, allowed me to blow off steam, which did help me regain rationality. Quietly, soothingly, he said, "Let's face it, Bill. The war's over for you. Some day you'll get a squadron. But not now. You need surgery. I'll send you to the U.S. Naval Hospital at San Diego."

Not saying a word, trying to hide my dejection, I was put to bed.

Chapter 7

Fabulous World of Jets

SHORTLY AFTER I HAD been discharged from the hospital in San Diego, I met a rather bored, blasé young man who, at the sight of my uniform and decorations, apparently had been provoked into debating with me on the meaning and value of life and the art of being happy. He looked as though he had once been frightened by water and had since managed to evade it in every form, from the hand basin to the shower cap. His skin, where it showed beneath the dirt, was delicate, pale, and his general attitude was completely lacking in evidence that he had ever been anywhere near that awesome plague of mankind, honest labor. Later, I was to learn that there was a veritable army of young people like him throughout California, particularly San Francisco, all boastfully non-regimented, non-conformist but strangely *de rigueur* in their uniforms-of-the-day: sneakers, blue jeans, dirty T-shirts, unkempt hair, and incongruous beards, calling themselves "beatniks."

The beatnik who had confronted me was articulate; and, although I would not necessarily equate the two, he was ostensibly intelligent. Digging deeply into his freshman-year philosophy, he threw his intellectual weight around and hit me with a strange combination of words which I could not understand; and when I could understand the combination, I could not understand him. But I gathered

that he had considered me with disdain, if not contempt, and that he had chosen the beatnik way of life because life to him was otherwise a massive monolith of monotony—pointless, colorless, unexciting.

I didn't know whether to laugh at him, resent him, or pity him. But it was a particularly useful encounter. It served to convince me—although I have never felt as if I had needed convincing—that going from private to pilot in the Marine Corps was the best thing I could have done. Until now, I had had an exciting, thoroughly enjoyable life in which occasional dullness was accidental, and not philosophically arrived at. I had always felt that I would not have wanted to have lived in my generation without having been an aviator. But by now we had just entered the age of jet aviation, and having started training in jet aircraft, it was to me almost unbelievable that any young man could say that life was pointless, that there was no challenge left. This is a fascinating era in which to live.

In coming generations, we shall require, increasingly, men of intellectual capacity and scientific talents, who can and will find challenge and stimulation in work requiring pure brainpower. But we shall also find a growing need for those who can combine nimbleness of mind with daring, with a sense of adventure, with old-fashioned guts. The new world of aviation—high-altitude, high-performance jets—is without peer in its challenge to man's brainpower, sense of adventure and total abilities. Supersonic aviation cannot ever be dull. In the air or on the ground, even a moment's lapse of awareness, or a second's indecision, can spell the difference between life and death, or cause instantaneous destruction of a craft worth millions of dollars. Often, even the grave, painstaking art of merely preparing for super-

sonic jet flight takes more time and effort than the flight itself.

My introduction to jets came prior to the supersonic period, after I had been assigned as an instructor in close air support techniques. "Class" consisted largely of flying with students over mock-up bunkers, tanks, artillery pieces, sandbagged emplacements, teaching them the arts we had cultivated in Korea. It was a unique experience; not only did I learn the importance and responsibility of teaching, but I left convinced that when you teach you learn.

After that assignment, I checked out in one of the first jet aircraft available to us, the subsonic Grumman F9F-2. Nowadays, there are practically no propeller driven aircraft in tactical squadrons. All aviation cadets learn to fly jets almost from the time they enter their advanced training. But the most effective means by which "post-graduate" aviators acquire new skills in new airplanes is the "checking out" process. It may begin, for instance, with a hand-picked echelon of pilots who will actually visit the plant where the new airplane is being produced, attend a variety of lectures given by skilled mechanics, designers, and engineers; and then receive actual flight instruction from those who have already flown the plane, usually test pilots. Then the chosen pilots either returning to one squadron, or to several squadrons, will pass on to others what they have learned; and from there, like capillary action, the new skills are spread through the services.

When I first was introduced to jet flying, I was taught that a jet airplane is essentially nothing more than a magnificent blow torch, based on the principle of physics that for every action there is a reaction. The action in the jet engine is to ignite a mixture of compressed air and fuel, injected under pressure, so that a tremendous exhaust of flame and

gases leaving the "rear exit," or after burner section, like a huge blow torch in flight, provides the thrust, (the reaction). The simplest analogy is a balloon. Blow it up, release it suddenly, and the exhaust will drive the balloon through the air; its flight will be short and erratic. But the jet airplane, of course, is aerodynamically designed for prolonged stable flight and maneuverability. Consequently, as in other aircraft, the jet plane will contain a complex of auxiliary machinery and systems for flight control. The beauty of the jet engine is that, compared with propeller driven planes, there are fewer moving parts. The principal moving parts are the compressor and turbine. The turbine is nothing more than a mechanical means of picking up some of the energy provided by the burning compressed air-fuel mixture to generate power. Among other things, power is primarily needed to keep the compressor going so that air "sucked in" at the mouth of the jet engine can be compressed before it is mixed with the fuel. Hence, outside power is needed to start a jet engine in order to get the compressor working up to the point where the engine will fire off, after which the turbine will keep the compressor going.

Off the main turbine-driven shaft there is an accessory section gear box, which picks up power to operate such things as fuel pumps and hydraulic systems by means of a complex series of reduction gears. It is of utmost importance for a jet aviator to know intimately the various systems in his plane, for only then will he be in a position to handle an emergency in flight.

Because there are fewer moving parts in a jet engine, I believe there are somewhat fewer occasions for emergencies than in a comparable propeller-driven plane. But usually an emergency in a jet craft is radically different. In jet flying, everything happens fast. The pilot, therefore, must think fast. At an ex-

tremely high altitude, for example, where the air is thinner and where there is less oxygen than at lower levels, he may experience a "flame out," no fire in the engine. The cause may be one of several factors, but sometimes by performing properly the pilot may get a "re-light."

The first man ever known to have survived an ejection from an aircraft travelling above the speed of sound was a 31-year-old civilian test pilot. In 1955, flying an F100 *Super Sabre* jet, he nosed over, went into a dive and suddenly his controls froze. Although a tall and husky man, he was unable to pull the stick back. He ejected at 35,000 feet over a bay and was unconscious when he hit the water. He was rescued immediately, but only due to a startling coincidence; a former Navy air-sea rescue expert happened to be in a boat less than 100 yards away. In the hospital, the test pilot lay unconscious for a week. Six months and several operations later he was discharged from the hospital.

I also know of a case in which another civilian test pilot ejected at supersonic speed and was so tragically injured that his existence thereafter could be compared only to that of a vegetable.

In 1958, a 34-year-old pilot ejected from a Douglas F4D *Skyra* at 18,000 feet, while just below the speed of sound. His helmet, gloves, watch and oxygen mask were ripped from him. His mouth was smashed, his eyes badly bruised, left arm dislocated, right arm broken in two places, pelvis fractured, vertebra fractured, and his head severely bruised.

Survival in high-altitude, high-speed bailouts is rare; survival without injury is unheard of.

The advent of jet aviation was so rapid that the aircraft designers were—and perhaps still are—far ahead of the human propensity for error. A principal human-error factor in jet aviation involves the speed. In fact, the speeds in jet aviation are so different

from propeller-driven craft that ordinary miles-per-hour, or knots-per-hour terminology is obsolete among jet pilots, who speak instead of *Mach* numbers.

Mach (pronounced "mock," borrowed from the name of an Austrian physicist) represents the relationship between the speed of sound and the speed of a moving body through its surrounding atmosphere. Mach 1, is the speed of sound, or approximately 760 miles per hour at average sea-level conditions. Mach 2 represents twice the speed of sound, and a fraction of Mach 1 is a percentage of the speed of sound; (.80 Mach, for instance, is 80 per cent of the speed of Mach 1).

According to aero-medical experts, it takes a really fast thinker anywhere from two to three seconds to respond to the stimulus of a visual emergency. Within that brief period, a supersonic jet aviator will have covered a distance of about one mile. Jet aviators, busy checking their instruments in flight, may pass a dozen or more miles in the few seconds spent looking at the dials.

To illustrate the human-error hazards of jet speeds, a noted aero-medical authority, Col. H. G. Moseley, of the Air Force, told the story of a huge jet bomber that had been "flying at 30,000 feet, at eleven in the morning on a clear day," and the bomber pilot, after a slow turn, "was startled to see three other jet bombers approximately one mile away on a collision course toward him. He did not have time to react or alter the course of his aircraft during the three or four seconds of closure, and shot through the formation, missing the nose of the first aircraft, flying under the second, and flying over the third."

The lone bomber pilot, upon landing, reported the incident, stating that he had knocked off part of the tail of the bomber beneath him. However, further investigation disclosed even more astonishing facts: Not one of the pilots in the "three-plane" squadron

was aware of what had happened; yet the lone bomber hadn't gone through just three planes. Incredibly, *he went through a flight of six bombers without being seen!*

The radical new world of jet aviation also stands in bold relief when we look back a comparatively few years into history. On October 24, 1941, a University of Chicago physiologist supervising an experimental parachute leap, involving a heavily protected, instrument-carrying parachutist, referred to his human guinea-pig jumper as "one of the bravest men" he had ever known. From a relatively slow-moving plane and wrapped in an electrically heated suit, the parachutist jumped into frigid air at 31,400 feet and free fell for 29,300 feet before opening his 'chute. In a recent six-month period (January-June, 1959) military aviation reports indicate that at least fifty jet aviators made similar jumps from much faster airplanes, but without benefit of protective gear, having ejected under emergency conditions. Nearly all had to free fall thousands of feet; they did not and would not consider themselves among "the bravest men."

In the icy, minus-65 F. temperatures where most modern jet pilots soar (approximately 40,000 feet), the hazards are many. Ejecting at such altitudes the pilot must free fall to at least 10,000 feet, or risk freezing to death while slowly descending under an opened 'chute. Yet so great is the human temptation *not* to free fall that many pilots who were trained to know better have opened their 'chutes prematurely; I was to know this temptation well at the time of my own emergency ejection from more than nine miles up.

Actually, high-speed, high-altitude aviation is so complex that aircraft designers have endeavored to leave nothing to chance, nothing to the probability of human error. The emergency ejection, for example,

is almost entirely automatic. Once the pilot decides to leave the plane, he pulls an emergency ejection curtain which touches off a series of automatic actions. The canopy is blown off, an explosive charge catapults the pilot, seat and all, from the aircraft, an emergency oxygen bottle attached to the pilot is actuated, the seat leaves the pilot after ejection and his automatic 'chute is set to open at 10,000 feet. All the pilot has to do is experience the free fall, which may last for several minutes, depending on altitude.

High altitude aircraft are also designed to accommodate a human body that must have oxygen to survive and a certain amount of air pressure to function efficiently, and safely. At sea level, air weighs 14.7 pounds per square inch. Strictly speaking, this is the amount of *pressure* exerted on every inch of our bodies by the weight of a one-square inch column of air 100 miles high, the upper limit of the earth's atmosphere. But air pressure decreases rapidly, so that for all practical purposes it is almost non-existent long before the top of the 100-miles column is reached. At 18,000 feet, for example, air pressure drops roughly by half—from the sea level 14.7 pounds per square inch to 7.34 psi. At 34,000 feet it is only 3.62 psi.

The effect of decreased air pressure is to make it more difficult for oxygen to pass through the lung walls and into the blood stream, and to cause expansion of gases in the body. These gases include the air in our lungs, in our sinus cavities, in our various organs (*e.g.*, intestines, stomach, kidneys), even the air trapped under fillings in our teeth. In pressure chamber tests, to which all high altitude pilots are regularly subjected, I have seen pilots howl in pain as simulated high-altitude flights brought the pressure in the chamber gradually down to the thinness

of 30,000 to 40,000 foot altitudes, affecting recently filled teeth.

In his cockpit, the high altitude jet aviator is protected by an oxygen system and a pressurized cabin. The pressure in the cabin is not equal to sea-level pressure, since the machinery required to duplicate sea-level pressure would be too cumbersome as well as too costly.

Cockpit pressure varies. It is never sea-level pressure, not even in commercial airliners. But a suitable differential is designed into the airplane in a manner that makes it possible for the pilot to function comfortably at various altitudes. The trouble comes when the differential disappears, perhaps the cockpit canopy blows off, or a leak develops, or a bullet is fired through the cockpit. Then decompression takes place, the gases in the body seek to expand because the ambient pressure (the surrounding air) is now thinner. The thinner the ambient pressure and the more rapid the decompression, the more drastic the effects. Sometimes decompression is so rapid it is called "explosive," as for example when a canopy is blown off and the pressure differential disappears in a fraction of a second. Having survived the highest emergency ejection on record, and not wearing a pressure suit at the time, I believe I can state authoritatively that the effects of decompression can be extremely painful.

In the cockpit, the "sense" of high speed is barely felt by the pilot on his body. In going from subsonic to supersonic speeds, the pilot's only perception of great speed is derived from the changes in sounds and his instrument readings. At straight and level flight, there is, theoretically, no limit to the ability of the human body to endure speed. But change your direction suddenly, dive, climb, turn, roll or yaw even slightly, and the speed of your jet becomes ex-

tremely important. Then two forces affect your airplane and your body.

The critical effect on your airplane is known as the Q-force. Stripped of its complex engineering nuances, Q is equal to the sum of atmospheric density plus speed. In other words, the faster you fly and the denser the atmosphere, the greater the Q forces on your airplane. Under high Q conditions, incorrect maneuvers can cause damage or even failure. Pilots must be especially careful of high Q loads at low altitudes, where the atmosphere is denser.

The force that affects the pilot's body is more familiar. Most people have experienced it in an elevator that stops suddenly, leaving stomachs behind, or pressing feet to the floor. We call it g-force because it is related to the gravitational pull of the earth. When a pilot suddenly changes direction—makes a turn, dives, pulls out of a dive—his body will be affected by g; and we call it "pulling g's." There is *positive* g, *negative* g and *zero* g, the celebrated weightless condition now receiving so much attention in space flight research.

Assuming 1 g to be a normal condition, a positive 2 g may cause you to feel as if someone were pushing you down in your seat. At positive 4 g, you may find that you cannot move your arms, legs or head without the greatest possible effort. A reverse "light" effect is felt in negative g, at which point objects in the cockpit may tend to float. While we have much to learn about the effects of zero g, or weightlessness, since the condition is extremely difficult to reproduce in the earth's gravitational field, we do know that under conditions of 4.5 to 6 g *positive,* or as little as 3 g *negative,* with corresponding increases or decreases of blood pressure on the brain, a pilot can become unconscious at the controls in flight. Most jet aviators now regularly wear g-suits, which function auto-

matically under pressure taken from the plane's system. The g-suit looks like a coverall with built-in "balloons" fitted about the abdomen, thighs, and calves, designed to expand or deflate with changes in g, thereby increasing the pilot's "tolerance" to the effects of g.

Because things happen so fast in jet flying, especially at supersonic speeds, a jet aviator must learn to respond almost instinctively to emergency conditions and in doing so he must learn to place utmost confidence in the complex of instruments before him. It is the sort of confidence that runs counter to all human instinct. Later in my career, when I started flying high-performance jets almost routinely, I was to sweat out the horrifying experience of "losing" my wingman in a high-speed let-down through overcast, at a moment when, on account of a fuel system failure, he had to rely on following me in to a safe landing with only minutes to spare. However, returning to his instruments, he took his eyes off me for only a moment to "check" his position, but the moment was enough for him to lose me.

From my first solo in the F9F jet, I was completely captivated; I knew that another age in aviation was about to begin, and for me to be a part of it almost from its birth was as though I, too, were about to start life over again, to live in a far more colorful, exciting world. By December, 1954, after I had logged more than 100 hours of flying time in the F9F, I awaited eagerly each advance in jet aircraft and an opportunity to join a jet squadron. Unfortunately, the opportunity had to be postponed.

In the interim, I had been advanced in rank to lieutenant-colonel, stationed at the Marine Corps Air Station at El Toro, near Santa Ana, California. There was a need in Korea for aviators of major and lieutenant-colonel ranks, so I volunteered to go over-

seas again, hoping that I'd be assigned to jets there. Before long I was on my way; and while I did not join a jet squadron, I did, at last, realize another of my dreams—command of a squadron.

Chapter 8

A Squadron of My Own

I BELIEVE THAT JET pilots, almost by instinct, are hard-driving, aggressive types who must always be working intensely at some problem, some challenge. In military aviation, the sense of fulfillment is tremendously enhanced almost everytime you take off and land in a jet because you've met a fierce challenge and you know that you are one of a small, select group on whom a nation depends. You don't consciously think of it that way, but somehow you feel it in your heart and you feel it when your friends and your family show their pride; you feel it when a little boy, eyes gleaming, looks at your wings and says "I bet you fly jets," you nod, he beams and cries, "Oh, boy!" Then he wants to touch you, shake your hand, talk, ask many questions; you answer his questions, indulgently, because through his pure and innocent response, his dreamy eyes, you see that little bit of yourself that has never grown up and, secretly, you hope never will. (Curiously, two little boys would play important parts in my rescue after my adventure in the thunderstorm.) Before my second tour of duty in Korea was to end, I was to learn that pride of accomplishment can be—in many ways and for many men—a source of inspiration, a motivating force, an end in itself.

When I first arrived in Korea, early in January 1955, I fully expected to be assigned to a jet tactical squadron, possibly as commander. But now the war

was over and there was much to do in peace, much that was prosaic. Most commonplace of all was the problem of supplies, food, fuel, weapons, ammunition. Account for them, store them, and move them about. Someone, of course, had to do it, but I had always hoped to be the last person in the world to be chosen for such duty. When the Group commanding officer, upon my arrival, told me that he'd like to give me a squadron—*but*, I could almost feel myself shudder. He was sorely in need of a logistics officer, and I was it.

In the past, I had always reconciled myself to unexciting duty because I knew that by doing my very best sooner or later the duty I wanted most would come along. But as a logistics officer I discovered something more. I discovered that when dull, routine, colorless chores depress us, it is most often we, ourselves, who are at fault. For we *allow* that which is petty or dull to conquer and suppress that which is unsuppressible—the human spirit. There is nothing on earth above which the human mind cannot rise; there are no dark corners of life that we cannot brighten, even a bit, for ourselves, if only we allow the human spirit to ignite a little flame now and then—to create a little perspective, a little humility, a little sense of humor, a sense of the pride of accomplishment, even when there are no medals to be handed out, and we must feel that pride only in our hearts. If this has the ring of a high school valedictory then I'm glad I rediscovered, in the aftermath of the Korean War, a truth I had somehow lost sight of.

As a logistics officer, I was confronted with many problems far removed from fighter flying. One of these was the Case of the Disappearing Drums. Made of steel and quite heavy (about 450 lbs. loaded), there were more than 3,000 of these fuel drums stored in long rows in a compound that was about

a mile square, protected by a fence, with guards patrolling a couple of hundred yards apart.

Shortly after I assumed the duty, I discovered that drum had been disappearing with considerable regularity but no one had solved the mystery. The most widely circulated theory was that Korean laborers were stealing them. To a poor Korean, even an *empty* drum was worth a small fortune. It could be converted into any one of many useful and permanent appliances, such as a stove, bath, or fertilizer container. A drum filled with fuel would make its possessor doubly rich.

But how could a poor Korean laborer roll one of those drums out of the compound without being caught? That was easy, ran the accepted theory, they didn't roll the drums, they walked out with them. Every Korean laborer owned a *chi ge*, a strong, wooden A-shaped frame on which, strapped to their backs, they could carry enormous loads for a considerable distance. Thus, armed with an A-frame, as we called them, any Korean with a little barefooted stealth, in the darkness, could walk off with a drum of fuel. So fully accepted in the area was this theory that the pilfering was written off as a petty cost of being in Korea; the cost of extensive protective measures would not have been worth the saving.

But I couldn't believe this theory. Having some knowledge of weightlifting, I argued that—with or without an A-frame—no Korean laborer (most were rather short and thin) could walk away with one of those drums, even if he had help in getting it strapped on. At best, I had maintained, even a powerful laborer might barely lift the drum on his A-frame, and would certainly not be able to walk far with it. Whoever the pilferers were, I insisted, they were making use of vehicles. I was sure that if we could kill the A-frame theory, the word would get around

and the crooks, fearing greater watchfulness on our part, would cease their nocturnal thievery.

But the A-frame explanation had become so well established that my theory was laughed aside. One day, while discussing the problem with a group of officers at dinner, someone remarked that Korean laborers actually had been seen walking down the road at night, fuel drums strapped to their A-frames.

"Did you see it?" I asked the speaker, somewhat abruptly.

"No, but . . ."

I broke in, "But you know someone who knows someone who has seen it. Right?"

He nodded. "Nonsense," I said. "It can't be done. Show me the man who says he has seen it with his own eyes, and I'll *prove* it can't be done."

"Why wait," he challenged, "prove it now, if you can." There was silence; all eyes turned toward me. I could see what they were thinking. *Put up or shut up!*

"O.K.," I said. "I will prove it." I told them I would demonstrate that no Korean laborer with an A-frame could lift a loaded fuel drum, walk 100 yards with it—only a fraction of the distance from any point in the compound to the road. We made a friendly bet of $100.

The following day a loaded fuel drum, strapped to an A-frame, was standing outside my office under a crudely lettered poster: AMERICANS DOUBT KOREANS CAN LIFT THIS LOAD ON AN A-FRAME. ANY KOREAN WHO CAN LIFT THIS AND WALK TO THE ROAD WITH IT, MAY HAVE IT, FREE.

The sign had been lettered in Korean by one of my interpreters, who also passed the word that I was going to allow all who wished to try, and that I would personally pay for the cost of as many drums as may be "won." I had had the fuel drum strapped

to an unusually strong A-frame. I wanted to be certain that no one would be hurt in the event the frame should break.

For such an enormously valuable prize, the word spread rapidly. It became the talk of the camp, as though a major sporting event were to be staged. Accordingly, I arranged for the lifting to take place on a Sunday afternoon in order to accommodate those who might have wanted to be spectators but might otherwise have been on duty. Long before the scheduled hour, a tremendous crowd had gathered in a picnic atmosphere, almost as if the entire camp had ceased all other activity. I imagined that, if this event had been staged back in the States, some enterprising Americans would have been there selling popcorn, balloons, and hot dogs, beer and buttons proclaiming "Come on Korea!" As it was, one form of American enterprise did invade the scene. I could see ragged "bookies" scurrying around in the crowd covering bets.

I don't think too many of the bets were riding on me; occasionally I'd overhear some remark like, "The colonel's got rocks in his head. Why I seen them Koreans myself liftin' heavier things." Or, "Ah, it's just a gag. The colonel feels like playin' Santa Claus with his money."

Added to the color of the occasion was a long, winding line of Koreans, many dressed typically in loose-fitting white trousers and tunic and sash, each patiently waiting to try his luck at the lift. For me, it was not exactly a cheerful scene. If so many Koreans were prepared to try, could it be possible that I had spoken too soon? But it was too late to do anything about it. Dressed in fatigues, I came out of my office to start the contest. Two of my sergeants were with me. They were to assist in standing by with me so that if the A-frame should break, or a contestant were to stagger awkwardly, perhaps dangerously,

we'd be there to catch the drum or the man or both, preventing injury.

Standing in front of the loaded A-frame, my sergeants at either side, I stripped to the waist, raised my hands and the buzzing from the crowd suddenly ceased as all heads in the line of Koreans leaned out, straining to look at me. Perhaps they were expecting me to announce some rules, or some tricky conditions that might make it difficult for them to "win." But quickly and unceremoniously I said, "O.K., let's get started." No interpretation was needed. One of my sergeants made a sweeping forward motion with his hand, and the contest was on as the first Korean, looking rather confident of himself, stepped up to the A-frame. He took his time, carefully adjusting the straps, apparently to be certain they were comfortable and taut. Then he went on one knee, using a sturdy wooden staff, which all laborers used as a push-up aid when lifting unusually heavy weights, he dug his feet into the ground, pressed hard on the staff and started to lift. The frame came off the ground, only a few inches, but it was enough to bring cheers and encouragement from the crowd of spectators and from the line of Koreans. But he could not raise it higher. He strained, he pushed, he dug his feet harder into the ground. He grunted, groaned, gritted his teeth and finally fell to his knee again, plainly defeated. We helped him out of the frame and motioned for the next contestant to step up; and so it went, one after another, at an ever increasing pace, as the Herculean nature of the lift became obvious to the Koreans.

However, as though it had been planned that way for a dramatic climax, the very last man to try accomplished the impossible, brought a tremendous roar of approval from the crowd and cost me $100!

His name was Kim Suk Moon. He was no more than five foot five; thin and wiry, and, unlike most

of the others, was dressed in nondescript cast-off clothes—khaki trousers, a frayed black jacket, and old brown field shoes. After putting a slight strain on the straps, as if to test them for strength, he did something none of the others had done. Instead of relying on his back for lifting strength, he made the most of his legs; and, like a weightlifter, he did a split, locking one leg straight behind him, using its support and strength to "walk" the weight up. He was the only one who had managed to lift the loaded frame completely off the ground and stand erect with it. A burst of applause and cheers went up, and I think I allowed a little cheer of my own to mingle with the crowd's. But I did not take my eyes off him for a moment, and neither did my sergeants. He was under great strain. We did not want him to get hurt. Every muscle in his sweat-covered face, as well as the veins in his neck, stood out sharply, as if ready to burst. This little man, I thought, was a natural weightlifter but I was confident he'd never walk the 100 yards to the road. Digging his staff deliberately into the soft ground, he started walking. His first few steps were confident ones, but after he had gone about fifteen feet there was no doubt in my mind that he would not make it to the road. Yet, he was obviously a stubborn, brave little man. I could see that he'd rather kill himself than give up. By now, however, I knew that I had more than proved my point. If only one out of scores of Korean laborers could lift a loaded fuel drum on an A-frame and walk with it, and then only with the greatest possible effort, we'd certainly have to look elsewhere for pilferers. As far as I and the entire crowd was concerned the A-frame theory was dead. Seeing Kim's face turn beet red under the strain, I told my Korean interpreter to tell him that I was conceding defeat and he could keep the drum; we would deliver it for him to his hut. I made the announcement to the crowd. They ap-

plauded. I did, too, for Kim. Thereafter reports of disappearing fuel drums became extremely rare.

Also, finally encouraged to look for anything but Korean night walkers our guards caught a few of the culprits who turned out to be, regrettably for us, some of our own immature men, not professional crooks, but just a couple of youngsters out for "kicks" and the extra money that could be derived from selling the fuel on the Korean black market. Knowing the weakly guarded spots in the compound, they had been able to make off with the drums in jeeps.

Best of all, at the cost of a little money (my own, unfortunately), a little sense of humor and some respect for a dignified people, we had made many new Korean friends. Apparently, the entire nearby village of Koreans had known that they were being blamed for the pilferage, but were too proud, officially or otherwise, to deny a "silent" charge. In a spirit of festive competition, we had done for them what they perhaps would have liked to, but couldn't do for themselves.

In June 1955, my patience was rewarded; I was assigned to take command of Squadron 121, the first Marine Corps attack squadron to see action in Korea and one which had established quite a combat reputation for itself. What I didn't know, was that its reputation after the war had been somewhat diminished and the morale of its men, pilots and ground crew, had tumbled to a new low.

Every aviator in the Marine Corps knew what had happened shortly after Squadron 121 had arrived to fight in Korea. The commanding officer, carrying a maximum bomb load for his craft, the Douglas AD, crashed on takeoff and was killed. Almost as if in tribute to their late commander, the squadron fought hard and flew hard. Their zeal, their flying

skills, their fame spread throughout aviation. They were lauded in writing by novelist James Michener.

But the trouble with the peace that follows war, at least for the professional fighting man, particularly for the aviator, is the too-sudden relaxation of tension and activities. There is a tendency to go from one extreme to the other, from great efforts and great achievements to mediocrity. It's a kind of we've-earned-the-rest attitude. Perhaps this is what had happened to Squadron 121, and the "vacation" may have been stretched too far.

Before assuming command of 121, I had examined the squadron's records and had talked with my superior, Col. Canavan, about the squadron.

It consisted of twenty-four aircraft, some 200 enlisted men, and thirty-five flying officers, still flying the AD, a large, powerful, single-engine prop-driven, attack plane with bomb and rocket racks on its wings, capable of delivering with extreme accuracy a greater bomb load than the B-17 bombers of World War II fame.

At the time, there was another AD Marine Corps squadron in Korea, Squadron 251. There had always been spirited competition between 121 and 251. Invariably, apart from banter and sharp repartee during personal encounters, such competition is galvanized by a single yardstick, the number of hours flown by the respective squadrons. But the yardstick is no mere numbers game, nothing as simple as sending a flight of four into the air to circle the field for two hours, claiming eight hours of flying time. Squadron flying time involves intensive training maneuvers, simulated attacks, night flying, pre-dawn takeoffs, takeoffs with maximum bomb and rocket loads, live-fire high-speed gunnery runs, napalm drops, foul-weather takeoffs and landings, precision flying—just about anything and everything that might add to the squadron's tactical skills. Generally, it includes all

the hazards of combat flying, except being shot at.

It takes a lot of hard work to rack up valuable squadron flying time. It takes long hours of planning and long hours of maintenance. It's no one-man show. Everyone, including the ground crew, has to pitch in; and usually the eight-hour day, five-day week goes out the window. It's a tense, serious business. It's gratifying when you're ahead of the competing team, but somewhat depressing if you happen to be a team man who doesn't like to be on the losing side.

When I assumed command of 121, the squadron was at the short end of the yardstick. Squadron 251 was top gun in Korea. The men of 121 were plainly disconcerted, and from their listlessness on duty you didn't have to be a personnel wizard to see that morale had suffered.

To me, the answer to 121's problem was *challenge*—encourage the men to fly more; restore their pride of accomplishment; set examples to follow, goals to reach.

I launched the challenge immediately. It was a beautiful, sunny June day for the usual change-of-command ceremony. The entire squadron had lined up on the field, behind the airplanes. The first sergeant snapped, "Attention!" and the squadron's insignia was handed to me; I was in command.

I asked the first sergeant to put the men at ease, and then told them that I was proud to have, as my first command, such a distinguished squadron. I told them it was my hope and desire to make 121 top gun in Korea—in the entire Marine Corps. I told them we would shoot at 1,000 hours of tactical flying during the month of June, 1,500 hours during July, and after that we'd play it by ear.

I had struck a responsive chord. I could see it by the grins that broke out, by the surprised glances some of the men threw at each other. Until then,

the squadron had averaged less than 1,000 hours a month. To increase the average in just one month, July, by 50 per cent would entail quite an effort, so I was not surprised to see skepticism mingled with the smiles. But I was supremely confident it could be done. From the records, I knew that many of the pilots were young and eager to fly and the ground crew was a proud one, ready to back their aviators.

My confidence was rewarded. We completed June with 1,000 hours of flying; exceeded our 1,500-hours goal for July and decided for August to set an all-time Marine Corps record, 2,000 hours. On August 24, there was jubilation in the squadron. We had logged 2,000 hours! It was hard on our pilots, but their spirits were so high one would think they had been fishing in the sun and didn't care to go home because the sun was still high in the sky and the fish were still biting. However, there was the ground crew to consider. They were glorious in their efforts, magnificently cooperative. Many had labored fifteen hours a day, seldom less than ten hours; and they accepted only one full day off, Sunday. They had earned some ease in their labors. But it was the ground crew who insisted we go on. I had been driving them, now they came to push me. One of the enlisted men, acting as a spokesman, said, "Sir, there's a lot more than you think left in us. The month isn't over yet. Let's go on and set a record they'll *never* beat in the Marine Corps."

I didn't need much urging, if any. I was overjoyed at their spirit. At the end of August, we had logged 2,600 hours of tactical flying, a record that to the best of my knowledge remains unbroken. But the record that pleased me most was the accident tally. There were no accidents, which also remains as an unbroken record. We received many official and unofficial commendations, including the Marine Corps aviation safety award for 1955. In military flying,

safety is no trite shibboleth, no look-out-for-bathtub injuries. A safety certificate in aviation is not an avuncular pat on the head for being a good little boy. It's a way of saying, "Thank you for not getting killed." That is why, shortly after I had been reassigned to the States, I was deeply saddened to learn that one of the men in 121 had been killed on an engine-failure takeoff.

We were, of course, not merely grinding out time in the air. Every flight was a planned training mission, live bombing, strafing, rocketry. Often, I would lead a pre-dawn flight of sixteen aircraft, taking off at once, rendezvousing in the dark, a precision maneuver with no room for error and nerve-taxing on all hands. But it was the sort of training for which there is no substitute. As Marine aviators we took pride in our tradition of instant-combat readiness. This was one of our ways of being ready and proving it, to ourselves as much as to anyone else. During our record-setting month, August, I was determined to spur the squadron on by setting an example and contributed 125 hours of flying time. The next largest total was hung up by a young lieutenant who logged 98 hours.

Our boys soon had much to write home about. The squadron had received considerable publicity in the local press and in important service publications, such as *Stars and Stripes* and *Naval Aviation News*. But I believe our Saturday morning fly-bys gave the squadron the most colorful and inspiring material for "Dear Mom and Dad" letters.

Since Saturday represented the end of a long, arduous week for us, we had made it a practice to launch pre-dawn flights, at approximately five A.M., spending three hours on split-up simulated attack missions, rendezvousing as a group, in formation, and flying-by the flagpole at exactly eight A.M., just as the first note of the Star-Spangled Banner was

sounded and the flag unfurled on its way to the top. On the ground, we knew, it was a tremendously impressive sight. It became the talk of area K-3, and with each passing Saturday morning increasing numbers came out just to see the "ceremony," until it seemed that the entire base was there every Saturday, including those who had cherished their sleep.

No doubt about it; 121 was now top gun.

Time after time, ground crew and pilots came to tell me how happy they were and often to plead against a reassignment or rotation. For me, at the time, it was a milestone, the most thrilling, joyous, rewarding period of my life. I received many congratulatory and jocular letters from old buddies, one of whom wrote: "Leave it to you to do something spectacular. Next time, I suggest you go in for something easier—like spinning into a landing."

I cannot deny my ego was flattered, although I hope not overly inflated. Having tasted command, there was for me nothing more succulent in life. Like many others in the squadron I, too, wanted more and although my normal tour of overseas duty had come to an end, I requested an extension to remain with the squadron an additional ten months. The request was granted, providing other officers who wanted a squadron with an opportunity to furtively plaster the squadron area with a variation on an old slogan: "Rankin Go Home."

When my time finally came in the spring of 1956 for rotation and reassignment, the change-of-command ceremony was my saddest day with the squadron. The night before, the enlisted men gave a party for me in their mess hall. They had gone hunting and had arranged to brighten the occasion with a surprise *piece de resistance*, pheasant. As an added surprise, and as a caricatured tribute to my passion for weightlifting, and physical fitness classes, they presented me with a miniature dumbbell, hand-

crafted in the squadron machine shop, inscribed: *From The Men of Squadron 121.*

If, as I had been told, I had left the squadron in a high, reconstituted state of morale, it could only have been a fraction of the great values and lessons I had learned from them. As I stood at attention during the change-of-command ceremony, I could only think of all the hard-working, fun-filled days I had spent with the squadron. In retrospect, I knew I had been far from perfect. I had made mistakes, errors of judgment, errors of discretion, but in the true spirit of the disciplined Marine, the entire squadron had indulged my shortcomings for the greater good and pride we had shared as a team.

It was with many fond memories that I stood at the change-of-command ceremony, in deep sadness, searching for words to express my feelings. Fighting a lump in my throat, I thanked the men of Squadron 121, simply but with feeling, for having given me the opportunity to arrive in Marine Corps Aviation.

Chapter 9

Supersonic!

IT WAS COL. HUMbert, Wing Personnel Officer, on the telephone. "Hi, Bill. How fast can you get up here to Cherry Point to take command of 122?"

"Are you serious, Colonel?" I asked, overjoyed. Ever since my return from Korea in 1956 I had been hoping for assignment to another fighter squadron. I had thought a great deal about my work with 121, and had come to the conclusion that only one other assignment could possibly offer greater challenge and not prove anti-climactic—command of jet fighters. And, although a tour of duty behind a desk had intervened, here at last was what I wanted. I could scarcely believe it—at last, *a jet squadron!* The wonderful, the chosen, Squadron 122, known for its many firsts in the Marine Corps, for its many outstanding commanders of the past, all great aviators —men such as Major Marion Carl who, ten years before, had been the first to exceed a speed of 650 mph, flying a Douglas *Skystreak.*

"Yes, I'm serious," said Col. Humbert. "We've just been talking about picking a new man for 122 and we are agreed you're the man. Can you come right up, tomorrow?"

I did not have to search for an answer: "Colonel, hang up. I just left."

As I put the telephone back on the cradle, I was indescribably elated. In the nights that followed,

before I assumed command, I lay awake for hours, dreaming how I'd make 122 the cynosure of the Marine Corps. But before taking command I wanted to be certain that I'd be as proficient in the FJ as the men who had been flying it in the squadron. Hence, I checked out in the plane with 122's departing commanding office, Lt. Col. Lynn Kelso, one of the finest aviators in the nation. Therefore, when I finally assumed command on May 18, 1957, I felt that with the help of Col. Kelso I could enter the squadron and fly the FJ on par with my pilots.

Meanwhile, as I later learned, my reputation for insistence on physical fitness, had preceded me. When the men of 122 had heard that I was coming, there was something of a reaction in the ready room and hangars. The men, I was told, removed the ashtrays from the rooms where there was supposed to be no smoking and started doing pushups and calisthenics in their rooms, barracks and ready room, to get in shape for what they knew was coming.

Physical fitness is not an end in itself for me. I am not a "bug" on the subject. But if I am to have responsibility for the lives of men and for the shaping of a squadron that at any moment could be called into action, I feel obligated to do *all* that I believe is best for aviators of complex, high-performance aircraft. I feel that when a man is in top physical trim it helps him meet the stresses and strains of life; in aviation it helps him get his mind off emotionally distressing problems.

In supersonic jet aviation a pilot cannot afford for a moment to have his mind distracted. Even on the ground, preparing his plane for flight, the slightest oversight on his part could lead to his death in the air, on takeoff, or on landing. Ground preparation is such a time-consuming, serious business that I have seen the most extroverted jet aviators in almost Jekyll-and-Hyde personalities on the field. One mo-

ment they'd be engaged in lighthearted banter with a buddy or the ground crew; then, as they approached the plane to go through the pre-flight check, it would seem almost as though they had slipped on a new personality—grim, tough, oblivious to the world, oblivious to all sounds and movements "outside." They'd feel nothing, hear nothing, see nothing, do nothing that did not pertain to the airplane or the crew working with them.

I was later to acquire another reputation on account of my insistence on keeping fit. It happened in Cuba, where the squadron had been sent to take part in supersonic gunnery training around Guantanamo. Supersonic gunnery is not for listless, indecisive personalities. Whether firing at stationary or moving targets you must call upon every ounce of concentration and energy at your command. But when in addition you happen to be a fighter pilot, alone in your cockpit, flying, fighting, navigating, aiming, deciding, firing, observing results, you must, in effect, become a supersonic personality, equally as fast in your thinking, equally as proficient and smooth in your movements as that conglomerate mass of engineering and science under your control.

Therefore, during the several weeks the squadron was in Guantanamo, I allowed no compromise with physical fitness. When we were flying, every pilot, every member of the ground crew had to adhere to a strict regimen of adequate diet, exercise, and sleep. As for the ground crew, if they were to go out at night, prior to being on duty the next morning, they nevertheless had to show up bright-eyed and alert, as if they had had a good night's rest. I had seen too many near-fatal errors committed by sleepy crewmen. I remember when a drowsy crewman, instead of pouring oil into an engine, poured hydraulic fluid. The error was discovered when another crewman happened to see the empty hydraulic fluid can

near the oil cap and in checking discovered the error. Had the error gone unnoticed, the pilot would have flown in an airplane showing a "normal" oil pressure reading, but he probably would never have lived to account for the cause of his engine-failure.

While a pilot does his own checking on the ground and it is a deadly serious business, he cannot get "inside" the airplane, such as a maintenance mechanic might, nor can the pilot be around to observe every little thing his crewmen might do in pre-flighting an airplane. To a great extent, the pilot places his life in his crew's hands.

I watched my ground crews carefully, as I did my pilots. But I did not go out with them socially and, therefore, couldn't always be certain where they were going, what they were doing, what time they went to bed. Since all of us had worked hard and tensely during the week, I encouraged my men, pilots and ground crew, to go out and have fun on weekends, let off steam, relax a bit. But one weekend the ground crew apparently went too far. They got loose in the local "Rum Locker," as they called it.

When I showed up on the field next day for an early morning flight, I could sense something was wrong. It wasn't the same; a certain "zip" was lacking. After making a few judicious inquiries and learning about the "rum locker" affair, I ordered my first sergeant to rouse the entire crew and muster them on the field, immediately! Within minutes, all the men were there, and never in my life had I seen such a bleary-eyed, dishevelled rogue's gallery, row after row. If ever I had seen men standing at attention, their eyes closed, sound asleep, it was then, in the dreary gray light of dawn. I went up and down the ranks, looking at each man, forcing them to hold their eyes open wide. I had never seen so many red eyeballs in my life! Naturally, upon being questioned, not one had been out drinking; not one had gone to

bed after ten P.M.; each and every one of them had been good little boys and had obeyed the old man's wishes. Nonetheless, I made it plain, in a brief but stern lecture, that I did not believe one of them; and if ever I caught anyone again reporting for duty with red eyeballs, I'd throw the book at him.

Thus did I gain a reputation for a rather unusual disciplinary technique: "Look out for Col. Rankin. He runs a tough outfit. He holds eyeball inspection every morning."

In my view, a ubiquitous sense of humor in a squadron is always a pretty good indication of its esprit de corps. The morale of 122 was high. The officers and enlisted men worked hard and flew hard. Our efficiency, our unblemished safety record, became the talk of the Marine Corps, and all hands were proud to be on the team. As a matter of fact, they took pains to exhibit their pride to be certain they'd be unmistakably identified with Squadron 122. The officers ordered custom-tailored blue blazers with silver buttons bearing the squadron insignia; their wives made evening-wear sashes with the squadron insignia; and the enlisted men wore blue shirts with the squadron insignia. We had many parties and went to many parties, together, in our blue blazers. We even had our own squadron song, written by several enlisted men and officers, and we'd sing it anywhere, anytime, at the blink of an eye. Once, we flew to Parris Island and stormed into the officer's club there, singing our song. It was evening, after dinner, and many ground officers were in the cocktail lounge, with wives and girl friends, enjoying a quiet drink. There has always been gentle banter between ground officers and flying officers, in all the services, on the subject of flight pay and the fact that flying officers are "richer" than their ground colleagues. Consequently, the real hilarity began when one of our pilots, marching and singing with us, car-

ried in a huge parachute bag. Pinned to the bag were several dollar bills, and a sign, "Flight Pay." As soon as we had finished our song, he tossed the bag on the bar and shouted, "Drinks are on 122!" But the bag held only paper, not dollar bills, and someone had to pay the penalty for frustration. One of our pilots found himself, fully clothed, in a swimming pool outside the club; sensing possible intimidation when the crowd went looking for another, more responsible, officer to take an involuntary dip, I made a tactical withdrawal.

Toward the end of 1957, 122 was handed a prize package that caused considerable excitement; it had been selected to organize itself as the first truly supersonic jet squadron in the Marine Corps, flying the ultimate in Naval aviation, the Chance-Vought F8U *Crusader*. Merely being selected for this was an honor. For me it was doubly joyous news because with new airplanes and a new squadron to be organized, I felt I'd remain as squadron commander for at least another year.

News that we were to reorganize to fly the F8U *Crusader* came after we had been ordered to Beaufort, South Carolina, to open an auxiliary Marine air station, now permanent headquarters for 122. After 122 moved in, the town of Beaufort took on a new, more lively air, as though there had been an invasion of a cast from a Broadway musical comedy. But it was nothing compared with what was to come, because reorganization for *Crusader* flying gave us a meticulously hand-picked squadron—all of whom had an intense passion for being associated with supersonic jet aviation and with what we felt was then, and may still be, the "hottest thing" in operational aviation. After we had become a *Crusader* squadron, 122's esprit de corps was the "hottest

thing" I had seen in my entire Marine Corps career. It took a little bit of doing for Beaufort to grow accustomed to "afterburner" salutes.

The afterburner is used for a wide variety of maneuvers, such as going quickly from subsonic to supersonic speeds, accelerated steep climbing, or taking a swift waveoff while attempting to land because for some reason the landing may be deemed unsafe. A pilot may sometimes notch his afterburner when taking off. It touches off a roaring explosion and fire shoots out the rear as though the craft has suddenly become a flaming meteor. It's impressive, if not frightening to spectators, and to pilots the sensation at the moment is one of being slammed in the tail by some massive force. Ground crews always enjoy the sight and sound of a notched afterburner, especially when the pilot zooms in low over the field to do it as a salute to them.

We had moved to Beaufort in September, 1957, but did not receive the *Crusader* airplanes until the following January. Still, much remained to be done in the interim. Organizing a squadron to fly and train in aircraft to be employed for the first time in the Marine Corps required months of careful planning. As squadron commander, I felt an awesome responsibility.

I was not merely acting as caretaker for more than $30,000,000 worth of airplanes and perhaps as many millions of dollars for the purchase of fuel, supplies and maintenance. A far greater responsibility was picking the right men to fly the planes and thereafter watching them hourly, day by day, making certain nothing happened to lessen their skills, their alertness and, indeed, their very passion for supersonic flying.

If jet flying had become a new dimension of aviation, then the swept-wing *Crusader* was a new dimension in jets. It was the type of aircraft in which

you could notch your afterburner and go supersonic almost before you had time to realize what to do next. It was the type of aircraft in which you flew at supersonic speeds as routinely as you had cruised at subsonic speeds in other jets, a type so aerodynamically "clean" that a mere dent in the wing could prove disastrous during supersonic maneuvers. As an operational aircraft, its design has, perhaps, reached the limit of the human brain's ability to control certain operational responses. The *Crusader's* roll and yaw stability, for instance, is largely under the control, not of the pilot, but an electronic system, because even the slightest error in correcting a roll or yaw at supersonic speeds might provoke fatal Q forces.

A *Crusader* pilot has to be so in love with supersonic aviation that, if he were married, his *Crusader* would have to be his second true love, requiring all the passion, all the fidelity, all the devotion of his first love. A conflict between both loves—as, for example, a wife who has tired of the suspenseful waiting for her husband to return safely from a supersonic gunnery range, or who has tired of her husband's constant cross-country flights, weekend departures, night-flying tactics—such a conflict germinates seeds of sorrow, regrets, distractions—disaster! Handpicking men for the *Crusader*, therefore, required a certain indefinable sixth sense.

I had been given *carte blanche* authority to handpick the men for the reorganization. But in doing so I sought the assistance of better and more experienced men from the group, one of whom was Col. Jack Dalton, executive officer of Marine Air Group 32, to which Squadron 122 was attached.

Col. Dalton and I went through all the records of the squadron personnel, carefully seeking not merely capable men but men who had shown a real personal desire to fly, a desire motivated by passion, not

flight pay. Col. Dalton, a few years my senior, was an ideal man to work with. He was an outstanding aviator, had commanded many squadrons and like me believed earnestly in the importance of physical fitness for aviators. A neat, well-built man with a tremendous sense of responsibility, hard-driving, serious-minded, he was the kind of man who could look at a pilot's face and say, "That man doesn't really like flying. Get rid of him," or, "That man is a good pilot, but he detests being a fighter pilot and he's going to end up in trouble"; and invariably his predictions would materialize, although at first there may not have been overt signs warranting such characterizations.

In spite of our careful selectivity, difficulties did develop for a few of our pilots, whom we had to later "ease out" of the squadron. Fortunately, sixth sense enabled us to discern the difficulties before tragedy could strike. We took no chances. In one case, one of our best pilots seemed to be having unusual difficulty in night flying, which requires alert and constant concentration on instruments, there being not a shade of tolerance for distractions. I asked the flight surgeon to call him in, and it developed that the pilot had been having spats with his wife. She detested night flying. She worried. She nagged. For the sake of the pilot's life and a million-dollar airplane, we discreetly had him transferred to non-flying duties.

However, we were to reap a valuable dividend for the great amount of time we had invested in our painstaking efforts: in spite of the necessity for planning everything from scratch for an entirely new squadron, new type of flying, and new training syllabus, by the time I had relinquished command, after more than a year with the F8U, 122 had achieved a safety record beyond all expectations. At present, this safety achievement remains a Marine Corps

record, and was a great source of pride for every man, from mechanic to aviator, in the squadron.

At times, our flight safety record so impressed high ranking officers that they came to see for themselves what we were doing and how we were doing it. Equally important, our safety record bolstered the wives' morale, making it easier on the pilots.

But we were prouder still that we had shaped 122 into a highly proficient combat-ready organization, for which we had received numerous official and personal compliments from high ranking officers throughout the Corps. One of my superiors told me that he had sent a report to Headquarters, Marine Corps, in which he stated that "122 has established a record with the F8U supersonic aircraft that is unequalled in the history of Naval aviation." One of our most valued compliments came from Col. Jack Dalton, when he told me that "122 is the ultimate in a squadron," and added, with feeling, "I don't think another squadron will ever be put together that will equal it, Bill."

These compliments were our most cherished badges of distinction because we felt we had fulfilled the principal mission of the Marine Corps, to be combat-ready. As a matter of fact, so highly did 122 regard its accomplishments and esprit de corps that when the Lebanon crisis developed and American troops were ordered there, we promptly offered our services to higher-echelon headquarters, ready to fly an entire fighter squadron across the Atlantic on an hour's notice. We had planned the flight down to its most intimate detail, even as to where and how we were to refuel in flight over the Atlantic. It was the squadron's feeling that if the Russians had become involved in that Middle East incident, we could have met their finest supersonic aircraft, and we could have outflown them and outfought them with such decisiveness that the F8U would have be-

come another major weapon of deterrence in America's arsenal.

I had been asked often by visiting Marine Corps officers and officers from other services why it was that Squadron 122's esprit de corps was such that even when we paraded as a squadron we stood out, why it was that we did so many things together and did it so well.

My sincerest answer was first to credit all the men in the squadron, pointing out that we had deliberately chosen the best men and this in itself was a substantial factor. Without good men, the best commander in the world might as well stay home and read a book; no amount of good theory or practice will help. But having good men I sought to make the most of them by setting examples, by trusting them, by delegating authority and then letting them exercise that authority with a minimum of interference, if any, from me. If they flew hard, I tried to fly harder. If I told them I had confidence in their abilities, I meant it exactly that way and would never do anything to betray that confidence; if anything I would do all in my power to bolster it.

I recall an unforgettable occasion when the ground crew had damaged a wing on my own plane. It was a scar, or groove, on the underside of the end wing panel, rather deep and about eighteen inches long. The book said this would cause instability at supersonic speeds and could not be repaired but would have to be replaced; a new panel would cost thousands of dollars.

Our safety record during the few months we had been equipped with the plane was unmarred, but now I would have to report such a large anticipated expenditure. Gloom was everywhere.

Calling the men together, I re-emphasized the seriousness of the business we were in, told them how expensive such an accident was, and warned

them to be careful. I complimented them, however, on their honesty and integrity in reporting the matter immediately.

Later the senior metalsmith came to me and said he thought he could repair it, and save both a wing change and the safety record. It sounded impossible in the face of what the engineer's manual had to say, but the men were confident he could do it; while I prepared to order a new wing section, I told him he could try.

The metalsmith went to work with his assistants; all that night they labored, with infinite care—filling, sanding, patiently hand-rubbing. When I came to work the next morning, I was proudly told that the wing was repaired and ready for my inspection. I could scarcely believe what I saw: even a close look revealed not the slightest trace of damage.

But, was it safe to fly? It had to be tested and I had to do it. I called the plant and the engineers told me that if it was a smooth enough finish and the filling held, it might work. But they warned me to be extra careful when I hit supersonic speeds. With the entire crew gathered at the edge of the field, I took the plane up and put it through various tests. As I watched my Mach needle wind up beyond the speed of sound, I was apprehensive. But, after climbing, diving and cautiously meaneuvering to increase the g load, without feeling the least indication of aerodynamic instability, my doubts vanished. I had promised the men I would make a "burner run" over them if all went well. Now, convinced that the amazing repair job was a success, I swooped in low and notched the burner. Looking down, I could see the men jumping around gleefully and throwing their hats in the air. But it was after landing that I was told the fantastic part of the operation.

The job had mainly been done with a fender repair kit purchased at a local auto supply store. The

kit had cost $1.98. I used the same plane during the remainder of my stay with the squadron for hundreds of additional hours of flying without any trouble. (Since the squadron was sworn to secrecy, this is the first time the story has been released. Aeronautical engineers please take note.)

The process of building the squadron, however, had to begin with a few pilots who were to be checked out in the F8U, after which they would in turn check out the remainder of the squadron.

The first stage in the process called for five of us, plus crewmen, to go down to the Chance-Vought plant in Dallas, where we would spend several weeks acquiring familiarization with the F8U's design and construction characteristics through a series of lectures to be given by Chance-Vought's designers, engineers, mechanics and maintenance experts. Then five of our F8U's were to be delivered by ferry pilots to Moffatt Field, California, where pilots attached to a Navy squadron had already been checked out in the F8U and would give us the check out; thereafter, we were to return to Beaufort and start accepting deliveries of F8U's for the remainder of the squadron.

Our first sight of the F8U at the Chance-Vought plant was breathtaking. With a wingspan of about thirty-nine feet, measuring almost sixty feet from the tip of the fuselage to the tail, the top of the tail standing about eighteen feet high, and the wings swept back almost forty degrees from the fuselage, it looked as slick and as powerful as an arrow-shaped rocket lying down. We were impressed by the hugeness of the air scoop up front, big enough for two adults to crawl through. We were impressed by the pilot's seat, so far forward on the fuselage, in front of the wings, that it sat at the very tip of the plane and a rear-view mirror was needed for the pilot to see the wings. But most impressive of all was the

design of the wings. It was the first supersonic airplane to employ what is known as a "variable incidence" wing; in effect, a two-position wing, providing added lift for takeoffs and landings. When raised by hydraulic lifts, actuated by a special handle in the cockpit, the wings look as though they are rising straight up the sides of the fuselage on an elevator, taking part of the fuselage with them.

I was even more impressed when I sat in the cockpit for the first time on the afternoon of our arrival. It was as if I were perched, slanting upwards, in midair and could see nothing outside but the blue sky above me; there before me in the cockpit was the most complex but most orderly arrangement of instruments I had ever seen. That same day, after we had heard and seen an F8U zoom over us in an afterburner run, all of us, like excited children seeing a startlingly new toy for the first time, could hardly do anything but talk about the F8U and that wonderful, wonderful day when we'd get behind the controls and take it up for the first time.

At the Chance-Vought plant, where we remained about two weeks, we received an average of eight hours of instruction daily, including talks with the F8U's civilian test pilots, and we devoted nights to reading technical literature on the plane and reviewing our own notes. This was the first time I had gone through such an intensive check out, starting from scratch at the plant, and the experience virtually electrified my mind. I could not absorb too much history or information about the F8U.

Apparently, a similar enthusiasm had infected its makers. The history of the F8U began in the fall of 1952, when the Navy requested aircraft manufacturers to submit designs for a tactical plane that could hit Mach One or more in level flight. In May, 1953, the contract was awarded to Chance-Vought and in about two years the plane was being test

flown, ahead of schedule. No doubt the F8U's additional power in climbing and in high-altitude performance impressed our top defense planners, for in the President's 1957 fiscal budget message there appeared this simple statement: "There will be substantial procurement of the Navy's new supersonic F8U."

We learned also that the *Crusader* had won a nation-wide speed record in 1956, hitting more than 1,000 mph and that it could operate with ease and power at altitudes above 50,000 feet; and we'd probably be cruising in it routinely at Mach One or more, at 40,000-plus altitude. In effect, Chance-Vought's designers had taken a powerful jet engine with an afterburner, the Pratt & Whittney J57, which hangs under the *Crusader*, and then built the rest of the plane around it, "pulling out all the aerodynamic stops," as one magazine put it. Every time I looked at the F8U at the plant, I could almost feel its sleek power, even though it stood statically on the field. Day by day, as the engineers explained and demonstrated the various hydraulic and electronic systems, through "stripped" versions of the plane, I was stunned at the complexity of the aircraft, the enormity of its engineering, and could feel only a sense of humility that all I had to do was fly it. We arrived at Moffatt Field in early January, 1958, and spent about five weeks getting checked out in the F8U. After additional ground classes with the Navy F8U pilots and passing a written examination on the F8U, we started flying. I'll never forget the first day I went up, not only was I the first of our group to go up and thrill at the experience, but fate had played a cruel, almost unnerving trick. Earlier that day, one of the Navy men had crashed, burned and died in an F8U as we all stood on the field watching—learning!

During the first few minutes of my baptismal flight, I had the peculiar sensation that the plane

was a speeding, fiery monster and I only a passenger. I was much too busy scanning instruments even to feel that I had anything to do with the controls. But after giving it full throttle, going supersonic in level flight for the first time, doing a few maneuvers, and several touch-and-go landings, I knew I was the boss. Upon landing, I was utterly elated. As I hopped out of the plane, bouncing on the ground I could hardly contain myself; I vigorously slapped a waiting Navy crewman on the back and exclaimed, "Boy! She's a great machine!" The poor sailor muttered "Yes, sir," as he straightened his cap. I went directly to a nearby Western Union office and sent a telegram to the squadron back at Beaufort: FLEW THE BIG BIRD TODAY. WHAT A MACHINE!

What had thrilled me most in the plane was the speed and smoothness with which, upon notching the afterburner, the plane went from subsonic to supersonic speeds, the Mach indicator moving so fast it seemed as though there were no limit to the plane's thrust. Maneuverability was equally astonishing, especially when I had pulled tight turns at supersonic speeds, something that would have been fatal in yesterday's "obsolete" plane.

After we had all checked out, we flew the F8Us back to Beaufort, but not until we had made a formation fly-by at the Marine Corps' El Toro air station in California, just to let the boys know Squadron 122 was going into a new business. As we approached Beaufort, it also occurred to me that no one there had seen or heard an afterburner run. I called the tower for permission to buzz the squadron area, and then notched the afterburner. Everyone knew we were back.

By late May, 1958, all our pilots had checked out in the F8U, and we launched our training program with intensity. We kept meticulous notes, frequently reviewing our work to seek improvement, eliminate

errors, and maintain records that would be useful to future Marine Corps F8U squadrons, of which there are now between eight and ten in operation most of the time.

Usually, the amount and type of training for a squadron is prescribed by higher echelon headquarters, where the generals and their staff determine the type of mission for which each squadron must become and remain combat-ready. It is the squadron commander's responsibility to pursue the training syllabus and report periodically on the combat status of his squadron. Combat-readiness is reported in various ways: as a percentage of over-all readiness for the squadron, as a percentage of readiness of each pilot in the squadron, and as percentages of readiness of maintenance, supply, and administration. There is nothing haphazard about a training syllabus, but since we were the first F8U squadron in the Corps, future plans and missions would depend to a great extent on any and all information we could pass on. A number of the techniques we had generated were incorporated in training manuals.

We devised, for example, a technique of giving a pilot a "taxi" checkout. He would take his plane out and prior to takeoff do everything necessary to fly the plane, even to the point of releasing his brakes, but stopping short of actual takeoff. In that way we could be reasonably certain whether he was prepared to fly alone. In a fighter plane like the F8U, there is no room for a second man, no one to sit at your side or behind you and say, "No, don't touch that or don't do this." A pilot in another plane will fly alongside, observing, maintaining radio contact; otherwise, you're alone, and there is no loneliness deeper, more awesome, than when you're in a supersonic jet and don't know what to do next.

The loneliness of doubt and hesitancy, however, cannot last long in a plane like the F8U. In an after-

burner takeoff, for example, you have only seconds in which to scan your maze of instruments to decide whether you should "abort" the takeoff or continue; a moment's indecisiveness can be fatal. And it's a decision you may have to make not once, but almost every time you make an afterburner takeoff, which in tactical training is often. Consequently, there can be little or no latitude in the physical and mental discipline demanded of supersonic jet aviators.

Perhaps one of the most difficult disciplines for a pilot of a high-altitude, high-performance airplane like the F8U is acquiring instinctive responses to emergency situations and placing complete trust in his instruments.

At high altitudes we may become afflicted with a condition we call "high altitude myopia." Especially in the F8U, sitting at the extreme tip of the fuselage, you often can see nothing, except the instrument panel. Your eyes are constantly focused in the cockpit or staring into space, and when you happen to glance out after focusing in the cockpit you may not see another airplane flying at you or past you within a hundred feet.

As for instinctive responses in an emergency, I can think of no more dramatic proof than the remarkable recovery made by one of my younger, more aggressive lieutenants, John Glen, the Texan. Shortly after Glen had checked out in the F8U and was moving into the tactics phase, he went on a tactics hop. Determined to out-maneuver his opponent, he exceeded his roll limitations and ended up with his plane tumbling through space out of control, like a large block of wood. As it slowed down, it went into a spin, with Glen being tossed around violently in the cockpit. As he tried to come back on the throttle, he was tossed to one side, the throttle was shoved into cut-off position and his engine flamed out. As he reached for his emergency power package to get power for

a re-light, he accidentally hit the emergency canopy handle instead, and the canopy blew off with a loud rush of wind. Now his position was extremely serious, but he remained calm, called on his training and acted instinctively. He managed to get his power package out, finally pulled out of the spin, was able to get a re-light in his engine, then went home and landed safely. When he came into the ready-room later, he was entirely calm, as if what had happened had been part of the training program.

Impulsively, I said, "That was the most fantastic thing I've ever seen!"

Unperturbed, he replied, "Sir, you should have seen it from the cockpit."

Another important reason for a supersonic jet pilot's faith in his instruments is a condition known to pilots as vertigo, in which, without visual reference to the ground or the horizon, his instruments may tell him that he is in nice straight and level flight but he doesn't believe it because he "feels" as though he is in a climb, or turn, or even upside down. Then, not believing his instruments, he may attempt to "level off," actually ending in anything but straight and level flight. In a supersonic jet if you doubt your instruments for even a second, it may be your last doubt.

I happened to be checking out one of my lieutenants on a cross country flight when vertigo and momentary doubt in instruments brought the squadron about as close as it had ever come to losing a plane and a man.

We were on our way back to the base at Beaufort on a lovely day in May. It was one of the clearest, most beautiful days I'd ever seen in the air. From a position of straight and level flight we could look down and see an area of perhaps ten thousand square miles, and in a glance take in that exquisite mosaic that is California from the the air—valley, snow-

capped mountains, desert, ocean, and the lush greenery of vernal forests.

But, later, after we had refueled at Dallas, we learned that the weather was closing in over Beaufort and we might have to make a "penetration," descent through overcast for a landing. After we had just passed east of Atlanta, the lieutenant called me on the radio, a note of desperation in his voice:

"Tiger One, this is Tiger Two. Do you hear me?"

I replied, "Tiger Two, I hear you. Anything wrong?"

"Tiger One," he said, "I don't think I'm transferring all my wing fuel."

"Roger, Tiger Two. What does your main tank say now?"

"I'm down to 1,200 pounds."

Unable to transfer fuel, this meant there was now barely enough fuel in his main tank to make Beaufort and no chance of getting to an alternate field. Under ordinary loud-and-clear circumstances there would have been no concern. But with bad weather over Beaufort, I wanted to be certain that he could make the penetration. Otherwise, according to my calculations, he might not have sufficient fuel for a second attempt around the field. Moreover, if it should be really "closed in" at Beaufort, we'd probably have to penetrate with the assistance of GCA (ground control approach), in which a controller on the field, making use of radar and radio-voice communications, would have to "talk" us down. Therefore, having considerably more experience in instruments and knowing that he had never made a GCA penetration under situations other than simulated training, I decided to have him fly on my wing. Typical of supersonic jet flying, it was a decision I had to make in less time than it perhaps took to read this paragraph.

I called him back. "Tiger Two, this is Tiger One.

Stick tight on my wing. Take it easy. We'll have to head for Beaufort, straight in." Then I briefed him on how to follow me through the penetration.

When we slipped under 6,000 feet it was obvious that we were going to have to penetrate through dense overcast in which visibility might not be more than 100 to 200 feet. But glancing out, I could see he was sticking tight enough on my wing to see me. Then I called again.

"Tiger Two, we're going to transition (raise the wing, lower the wheels for landing) after I've slowed down. Follow me."

"Roger," he replied confidently.

He was a short, hefty young man with the build of a strong wrestler. He was a good pilot and had taken his physical fitness seriously; in fact, I had considered him one of my flying and weightlifting proteges and had every confidence in him. I looked over at him, smiled encouragingly; he nodded to indicate that everything was fine. About then GCA called:

"Tiger One, we have you on radar contact. Make a turn to the left to 300 degrees, then back to three-two-zero." This was their way of being certain that it was us that they had on radar. As soon as we completed the identification maneuver, GCA called again.

"Tiger One, we have you." It was an enormous relief. GCA continued, "Now we're going to bring you in on approach to runway four. Continue letting down and level off at 1,500 feet."

Then as I started an easy right hand turn, I could barely see him on my wing. We were in almost solid "soup." I made a tight turn, and suddenly his voice broke in. "Tiger One, *I've lost you!*" He sounded frantic and had every reason to be. At our rate of speed, now below 1,000 feet, headed down, lacking orientation, he could crash in seconds. I reacted

instinctively, forgetting formal radio talk. "O.K., now. Level your wing. Regain your attitude and take up your last assigned course and altitude." Then, after a momentary pause, I shouted *"break!"* to let him know that I was now going to talk to someone else. I called the field. "GCA, pick him up and work him in. I'm taking a waveoff and I'm going to climb back to altitude to get out of your way." I raised my landing gear, lowered my wing, notched my afterburner and shot up to 20,000 feet. Then I heard him talking to GCA. "This is Tiger Two. I'm level now at 1,000 feet, heading about three-zero-zero."

"Roger," said GCA. "We have you."

From then on, he was on his own. He'd have to make it down the first time, or take a waveoff and eject immediately because he would surely not have enough fuel to try again or climb to a higher, safer altitude for ejection. But from his voice I knew that he had not lost his presence of mind and was doing what comes naturally to a well trained *Crusader* pilot. I was proud of him, but I was sweating it out with him. Within the next sixty seconds, I'd either have good news, or tragic news. I could hear GCA working him in with a few "S" turns and then the expert who would land him took over. "This is your final controller now," said the voice, "taking over. Do not acknowledge any further transmissions. Start your rate of descent at 500 feet a minute. You are now above glide path . . . slightly above glide path . . . . coming down on glide path . . . . . *ON* glide path . . . . holding glide path . . . . . holding nicely . . . . . you're one mile to touch-down . . . . you're now below GCA minimum, take over visually . . . . now over touchdown point . . . take over and land."

Then I heard the same voice, "Tiger One. Come on in. He's on the deck."

I sighed deeply, opened transmission to GCA and said, "Roger, boys. Thanks a lot."

GCA came back. "Tiger One, are you composed enough to make a landing now?" I could almost see them smiling in the control tower.

"Anytime," I answered. "I've got lots of fuel."

When I landed, I went directly to the ready room to ask the lieutenant how come he had "lost" me in the overcast.

"Colonel," he said, "I was doing nicely on your wing then all of a sudden I felt as if I were flat on my back. Yeah, vertigo! I couldn't believe it. I took a quick glance again at my instruments and when I looked back you were gone. When I finally got oriented, I was in a steep climbing turn to the right." That position at his speed and altitude was perhaps as close as he shall ever come to a fatal spin.

During most of the remaining year and until I was relieved of command in June, 1959, Squadron 122 averaged about 500 hours of flying a month. Combined with our perfect safety record, we were confident we had set not merely a record that had brought us many compliments, but an important precedent in Marine Corps aviation. We had demonstrated that a high-altitude, high-performance tactical squadron can become combat-ready in a relatively short time, if all hands are eager and dedicated.

Naturally, we could not "prove" our techniques because there is only one ultimate test for combat-readiness and it is the one test we always pray shall never be forced upon us. But there are certain demonstrations, apart from the secret data filed with headquarters, which can be fairly obvious and convincing to those who can appreciate the finer points of supersonic aviation.

I have in mind, for example, such things as formation takeoffs, precision fly-bys, acrobatics and dog-

fights. In this realm, we had given a number of "demonstrations" (part of training) which were, we proudly felt, rather impressive.

These are highly skilled maneuvers, and the deadly seriousness and difficulty of such operations is discernible even to a layman. All you need do is visit a supersonic jet field and observe one F8U pilot and his crew preflighting, preparing for a takeoff. A yellow power cart is off to one side, perhaps on a jeep, a crewman standing by to start the generator that will deliver power to the plane through a pair of thick cables plugged into its side. The pilot and his crew chief circle the airplane, slowly, carefully, grimly, checking everything from the condition of the "skin" to the inside of the airscoop. Two other crewmen, who have performed their necessary preparations, are standing by attentively at a respectful distance, ready to respond if the pilot should merely lift a finger or raise an eyebrow. Now it's quiet, deathly quiet. Nobody talks. The pilot, standing beside the plane, may utter only a word or two now and then, perhaps a succinct question while pointing to a part of the plane: *New wheel? Yes, sir. Checked? Yes, sir. Good.*

Now ready, the crew assists the pilot into his G-suit and his torso harness, helps him adjust the straps, one of them holding the pilot's helmet and oxygen mask; the pilot checks the revolver strapped around his chest in a shoulder holster, feels the lower part of his right leg for the jungle knife, taps the padded parts of his G-suit, checks the tautness of his torso harness, slips his helmet on, is assisted into the plane, which, with canopy open, juts up at a sharp angle like the open mouth of a plastic serpent, snaps his torso harness onto the parachute and is now a part of the airplane that will fire him out in his seat in the event of emergency. The pilot quickly glances about him, looks satisfied, signals; power is shot

through the lines, now the air is filled with the noise of a roaring jet engine. Talk is impossible. But there is still more checking: the moving parts of the airplane, the tail, rudders, variable incidence wing, instruments in the cockpit. The entire crew participates, each at a station, each responding to sets of deliberate, precise, hand signals from the pilot, each in turn replying with similar hand signals. Now everything about the plane—the pilot, the crew, the colorful power cart, the noise, the dangling hoses—seem to blend with uncanny perfection, a symphony of sights and sounds and a knot of men staging a ballet of hand movements. Finally, there's a rapid crescendo; the ballet disappears, the yellow cart slips away, the canopy is down, the serpent is now a blazing streamlined metallic monster waiting, at a signal, to ease gently toward the taxi line, where its engine will roar louder than ever in a final run-up check, and at another signal will zoom down the runway, its afterburner suddenly belching a huge tail of flame, shattering the air with a deafening explosion.

Multiply this scene by as many planes as there may be in a division takeoff (four) or a squadron takeoff (twenty to thirty); while it may be impressive, colorful, noisy, and perhaps thrilling to the lay observer, it is, to the veteran aviator, to the Wing or Group commander, to the general who may need to order that flight into immediate combat, a dramatic demonstration of technical proficiency, a climatic performance of men and movement, of timing and coordination, of discipline and training, the payoff for many months of painstaking rehearsals in which the perils of the supersonic age lurked constantly offstage.

It was thus with great pride that we had been able to produce many division and squadron takeoffs,

smoothly, accident-free, and to receive the accolades of professional critics.

We had performed at many places. We had made many cross-country flights to California, zooming across in four to five hours, with so many division and squadron fly-bys, landings and takeoffs that a somewhat perplexed Marine Corps commanding general at a West Coast air station once asked me whether I was attached to his Wing.

My work with Squadron 122, my association with its happy, aggressive, disciplined, outstanding aviators was a labor of intense, unswerving love. I did everything possible to remain with them as long as possible, but I knew that the inevitable would come. No squadron commander can remain for very long with one squadron; like his aviators he must eventually move on to other duties, perhaps where he and his aviators may utilize experience to greater advantage, in administrative or planning assignments, or training in new amphibious techniques. After approximately two years with 122, an unusually long time for a squadron command, some of my colleagues were beginning to ask whether my 122 assignment was my "twilight tour." *Are you going to retire after 122?*

As June of 1959 approached I passed my second year with the squadron, and learned that the end was near; the squadron was to be broken up and rephased, with many new pilots being assigned to it. I couldn't bear to watch the break-up; I asked to be relieved.

When the men heard I was going they decided to give me a going away present; all hands would start at dawn in a massive attempt to set an all-time, one-day record for flying in an F8U squadron. They wanted to fly 122 hours as a final tribute for Squadron 122. I gave permission and requested the honor of flying the first and last hops of the day.

We secured early the night before, in order to get plenty of rest; we might be on the go from dawn to midnight in the attempt.

When I arrived early next morning, I was amazed to see so many men and so much activity. The duty officer told me proudly that most of the men had been there since four o'clock, and that some of the check crews had actually worked all night, preparing the planes.

My last day with the squadron began with me leading a flight of four in a dawn-shattering takeoff, the four powerful afterburners belching flame and thunder at the mere nod of my head. The show was on and we met the sun coming up behind our hangar as my wheels left the runway.

All that day the air was charged with squadron spirit. The men refused to leave the working area for lunch, so I had food brought to them. By three P.M. my calculations told me not only that we would make it, but that we would do it long before midnight, as had originally been planned.

By early evening the time had come for the last hop. Even the sudden violent thrust of the afterburner couldn't jolt the melancholy out of me as I made my last takeoff with 122.

A few minutes later, the duty officer called me on the radio and said we had attained our goal and the troops were waiting for me to land. I came in low and notched my burner right over the hangar, just as I had done when I brought the F8U into the squadron in early 1958, and so many times thereafter. As my wheels touched the runway, I saw the sun go down behind our hangar. An era in my life was over.

When I taxied in, the men paraded onto the field carrying a large sign—122 FOR 122—the record still stands. I stood up in the cockpit and thanked them, then we posed for photos with their big sign. The

atmosphere was alive with the feeling of accomplishment.

As I left the field, I knew there would never again be for me an experience as overpowering as command of 122. I felt that, from there on, anything else would be stale and flat by comparison. I could not know, of course, that within a few weeks I'd be tumbling more than nine miles through space into a hellish chaos such as no human being had ever known.

Chapter 10

The Big Bailout-Takeoff

HAD I NOT BEEN asked to give Lt. Herbert Nolan a checkout in the F8U *Crusader,* I probably would never have returned to the squadron's headquarters at Beaufort. But eventually I did return—to the hospital!

As the final stage of Lt. Nolan's checkout, I had arranged for us to fly from Beaufort to the Naval Air Station at South Weymouth, Massachusetts and return, in the F8U. It was a distance of no more than 800 miles either way, and we easily could have made the round-trip checkout flight in half a day. But when we landed at South Weymouth, Herb felt that his radio had not been working properly and he'd prefer to have it fixed before returning to Beaufort. But the radio in an F8U is no ordinary aircraft instrument. It is so complex yet so important in flight that often when we have difficulty with it, the entire radio is simply removed (it is designed that way) and a new one installed. However, since there were no F8Us at South Weymouth, no "package" radios in stock, a technician was required to repair Herb's radio. He was concerned over the delay, but I told him not to worry, that I'd send an RON (remaining overnight) message to Beaufort. It was a fortunate decision because on Sunday Herb was to need that radio to learn that I was in trouble.

Sunday, July 26, 1959 dawned bright and beautiful. Herb and I arrived at the field exactly at 3:30

and got dressed in our flight suits—finely woven coveralls with many zippered pockets. Mine was a light blue summer-weight flight suit. Ordinarily, I'd be wearing a bright orange suit, which is ideal in the event you happen to have an accident and become the subject of a search. But, on this day, for a routine straight-and-level flight that would be over within about an hour, nothing could have been further from my mind than accidents or emergency ejections. And my orange suit happened to be in the cleaners.

Most laymen imagine that nowadays high-altitude aviators always go up in a Buck Rogers type of pressure suit. Had I been wearing a pressure suit this day, my survival would have been far less noteworthy. For one thing, I would have escaped the effects of "explosive" decompression and, perhaps, would have ridden out the thunderstorm in relative comfort. In a pressure suit, you can go from sea level to the moon and back again without concern for ambient pressures. But pressure suits, largely experimental during the past decade, have only come into comparatively routine use for high-altitude pilots in the past year or two; at this time, I did not even own a pressure suit.

It is not, moreover, an easy thing to use, or grow accustomed to, a pressure suit. Each suit must be individually tailored for the pilot. Then, to be fully garbed and ready to go, a pilot virtually needs a valet to assist him; further, the pilot must remain in an air-conditioned room with the suit plugged into an air conditioner. Thereafter, he must move quickly to the plane and plug the suit into the plane's air conditioning system. If I were in combat, I'd rather take my chances with "explosive" decompression than be restricted in movement on account of the bulky pressure suit—especially now that I know exactly what it is like to come out alive from the

highest non-pressure suit ejection on record.

After Herb and I had donned our flight suits, I told him, as part of his checkout procedure, to file the flight plan for our return trip. All military aviators, when taking off at one base and landing at another must file a standard form, DD175, on which we record our names, ranks, type of aircraft to be flown, number of aircraft in the flight, route and altitude, estimated time of arrival, and whether the flight will be on IFR (instrument-flight rules) or VFR (visual). Under IFR, you may not deviate from your assigned altitude and route without first obtaining permission. The flight plan makes it possible, therefore, for military authorities—as in civil aviation—to know where each plane is at all times. The information is then fed into a teletype circuit so that the control tower at Beaufort would know approximately when to expect us.

An early morning weather summary looked good, so I told Herb to file VFR while I made a last minute check on the latest reports.

Nevertheless, a high-altitude, high-performance aviator is almost always concerned with his instruments in flight. Usually without reference to some point on the ground, or the horizon, even on cloudless days, he must constantly check his altimeter, gyro-compass and attitude indicator to ascertain the position of his plane. If for no other reason but to avoid the hazards of vertigo, he cannot rely on his senses to be sure that he is at least in a straight-and-level attitude.

While Nolan was filing the flight plan, I went to a small adjoining office to get weather information from the aerologist. I asked him about weather conditions en route, and at Beaufort. He said, "The weather is good at Boston, good at Beaufort, and according to the latest reports it's VFR all the way. There may be a few scattered clouds over Beaufort,

and en route you may expect to run into some thunderstorm activity, Atlantic City south to Charleston. There's considerable thunderstorm activity in the vicinity of Norfolk. The tops of the stormclouds are reported at 30,000 to 40,000 feet."

I said, "Well, since I can go to 50,000 feet if necessary that won't bother me. I can get over this weather with ease. Any frontal conditions?"

"Negative, colonel. This weather is strictly of the isolated thunderstorm variety."

I returned to the operations office to tell Herb that we were going to end a perfect weekend with a perfect flight in perfect weather. "If we run into any thunderstorm," I said, "we'll just go over it." With a 10,000-foot safety margin to get over the tops of the highest reported thunderstorms, I spoke with confidence. The flight plan had us at over 40,000 feet en route; direct, Boston to Beaufort; estimated air speed of about 540 mph; estimated arrival about seventy minutes after takeoff.

Under the circumstances, the flight would be barely enough to "burn down," that is, to be light enough to land with remaining fuel. In an airplane like the F8U, if the plane is too heavy upon landing, to avoid stalling, the landing has to be at a higher-than-usual speed.

As Herb and I, holding our helmets and gloves, walked toward our plane, I started briefing him. We'd check the radio first to be sure it was working and after obtaining taxi clearance we'd make our normal run-up check, then I'd call for takeoff clearance, and we'd make an afterburner takeoff. As soon as we were airborne, I'd come out of afterburner, but he was to remain in afterburner until he'd caught up with me. Then as soon as he'd come up on my wing, I'd switch from the tower to tactical radio frequency in order to maintain in-flight communication between us.

"When you get aboard," I concluded, "let me know. Then we'll climb to 44,000 feet, and on course to Beaufort. Any questions?"

"Negative, I've got it."

We arrived at our airplanes and proceeded to prepare for flight, a routine that was to take almost as much time as we had estimated for the flight itself. I began first with the visual, pre-flight safety inspection of the plane, starting at the nose, looking down the skin of the fuselage, then into the air scoop, then from the front-left side completely around the plane, deliberately, seriously, slowly. I looked with particular care at the landing gear, the tires, tail surfaces, leading and trailing edges of the wings, the afterburner, the horizontal and vertical stabilizers.

Most experienced pilots can complete such a pre-flight check in about five minutes. This time it took me over twenty minutes; at my own base, the plane would have been checked first by an experienced F8U plane captain, using the same long, written check-list that most pilots have committed to memory. But with or without an experienced plane captain, I like to take my time. A pre-flight check is too serious a business for a rush job. The older I get the more careful I get. I've seen too many tragic and near-tragic accidents as a result of slip-shod pre-flight checking. And I have discovered the strangest defects in such checks.

Once, I found that the rudder baton had not been removed from my plane. A rudder baton is used when the plane is parked, to keep the rudder from flapping in the wind. Taking off with the rudder baton in place would have been similar to speeding down a highway, into a sharp curve—with a locked steering wheel!

A common occurrence on a plane like the F8U is hydraulic leakage; what we call "static" leaks, not usually serious because they generally stem from

loose seals, which tighten as soon as the airplane is underway. A real hydraulic leak can be serious, if not fatal, in flight because so many parts of the plane are hydraulically operated. Loss of hydraulic power for the control stick, for example, leaves you with absolutely no control of the plane, and with only seconds in which to decide whether you should eject. Without hydraulic power, the stick becomes immovable.

At this pre-flight check, however, I found the plane in as perfect a condition as I had ever seen it, not even a static leak, usually inevitable after a plane has been on the ground a couple of days. But finding an airplane in perfect condition, outwardly, can be similar to a doctor examining a patient, declaring him in perfect condition, only to have the patient die of a heart attack outside the doctor's office.

As soon as I had completed my check, the crew assisted me into my life jacket and torso harness and I strapped on my jungle knife. One of the crewmen held out my helmet and oxygen mask, but I told him, "Not yet." Before putting on my helmet and mask, I like to get into the cockpit, make myself comfortable and relaxed while going through the next step, a general survey of the cockpit and instruments; in the open on a hot day I feel too warm in a helmet; but with built-in air conditioning, the plane is comfortable after the canopy is down and the engine is running.

When you sit in an F8U, the only "spare" space around you is room to stretch your legs to the rudder pedals, a few inches to either side, and no more than eight or ten inches between your head and the canopy after you've put on your helmet and the canopy is down. The cockpit itself is a jungle of instruments—white- and green-faced dials, warning lights, switches, buttons, levers, handles, cranks, one hundred or more instruments—plastered, riveted,

imbedded into almost every available inch of space, directly before you, above and behind your seat, under your feet. There are so many flashing warning lights and printed "Warning" legends that one non-jet pilot, upon seeing an F8U cockpit for the first time, called it a "flying emergency."

But the arrangement of instruments is orderly. Instruments that are in some way related to each other for interpretation of in-flight performance are grouped, the most important ones on the panel before you, so that you may take them all in at a glance and, while reading one, you may see others in the periphery of your vision. You seldom "fix" on an instrument. You scan them constantly in flight and through the familiarization of intensive training you learn to recognize instantly whether anything is wrong.

After I had slipped into the cockpit seat, the crew brought up the yellow power cart, plugged it into the airplane, and started the generator to send power into the plane, actuating the instruments. Needles flickered, dials jumped. I scanned the instruments systematically, starting from over my left shoulder, completely around the cockpit to my right side. When all seemed well, I asked the crewman to place my helmet and oxygen mask at my right side and then buckled my torso harness into the parachute pack and ejection seat. I bent over to the rudder pedal crank between my feet and turned the handle until the pedals moved slightly forward, giving me more room to stretch my feet.

Then I put on my helmet and oxygen mask, tightened the chin straps, then I connected my oxygen mask, which runs directly from the mask to the parachute pack, then into the main supply system. If I should eject, the main oxygen hose would be ripped away but I would have a five to ten minute supply of oxygen from the parachute pack, ordinarily

sufficient to survive a high-altitude free fall through the thin atmosphere.

At a two-fingered signal from me, the crewman on the power cart started compressed air flowing into my engine; I hit the ignition switch and got a "light." I heard a loud *whoosh* and knew my engine was on.

Having a good start, I turned on the main generator switch and rechecked all the instruments, including the radio. Then I signalled for the crew to check with me all the moving parts of the plane, which is done systematically and as each part was observed moving faultlessly, I got a signal from the plane captain. With the engine, instruments, and all movng parts in good order, I signalled the crew to take the power cart over to start Herb's plane, and while they were busy there I continued checking my instruments. As long as the jet engine is roaring and still on the ground, I constantly scan the instruments. If even the slightest defect should develop at the last moment, I would not taxi out for takeoff.

After about twenty minutes had elapsed, Herb called me on the radio, using our old Squadron 122 calls. "Tiger One, this is Tiger Two. All ready to go."

"Roger, Tiger Two. Switch your radio to tower frequency."

I reached down, turned my radio to the pre-set channel for tower communications and called for taxi instructions.

"South Weymouth tower. This is Marine jet 43696 for taxi instructions. Over."

"Roger, Marine jet 43696. You are clear to taxi onto the runway."

"Roger."

I signalled the ground crew to pull the chocks from the wheels, eased the throttle forward, eased up on the brakes and moved slowly out of position, toward runway 170.

Now the canopy down, shut tightly, I was entirely on my own. If anything were to go wrong with the airplane, I'd have to spot it on my instruments. Thus, even while taxiing out, my eyes are constantly scanning the cockpit, left to right, up, down; left to right, again and again and again.

We pulled into the wide parking area off to the side of the runway. Here we were to make our final and most important instrument check, the run-up check, throttle at full power.

I took a final, reassuring glance at the red flag sticking out of the map case at my right foot. This flag is attached to the safety pin from the ejection seat, which one of my crewmen had removed just before we shut the canopy. When the safety pin is out, the ejection seat is armed and ready to fire the pilot out of the plane in case of emergency. The red flag is attached to the safety pin as an attention-getting device.

I make it a habit to take the red-flagged safety pin from the crewman, wrap the flap around the pin, and stick it into my map case where it juts out reassuringly during flight.

There's a good reason for the safety pin. To actuate the ejection seat, the pilot, his hands close together, palms facing him, reaches up and slightly behind to grasp two metal handles, shaped something like the seat handles in a bus. Pulling down on these handles, he brings a strong nylon curtain down in front of his face. The curtain protects his face against the tremendous wind blast as he is shot out of the plane and almost simultaneously sets off the explosive charge that fires the seat.

The safety pin, which is like a large cotter pin, is left in its position, to the right and behind the pilot, until the very last moment—because men working around the cockpit, and sometimes the pilot while getting in, may slip and inadvertently reach for the

nearest thing to grab—the ejection seat handles. I know of a case in which this happened in a hangar and a crewman sitting in the seat at the time was shot out of the plane and cannonballed into the hangar roof, and killed.

When the pilot pulls the curtain forward and it is about level with his eyes, the canopy is supposed to go off first, then the ejection seat. This occurs in rapid sequence, but if the canopy should be jammed and fails to jettison, the pilot can reach up behind him to his left and yank a lever which directly arms the seat; the pilot then can resume the forward pull on his ejection curtain, firing himself *through* the canopy. Better a few face cuts than to be fatally trapped under the canopy! Sometimes, a slight mechanical maladjustment of the arming mechanisms can cause the pilot to go through the canopy anyway.

After we had completed our roaring run-up check, Herb and I exchanged thumbs-up signals and I released my brakes, rolling forward a few feet, and quickly slammed my throttle into the afterburner notch. Sharply, swiftly, like a rocket, my plane climbed to altitude. A takeoff is a supremely thrilling experience about which I have never grown blase, perhaps never shall. At that moment I am a boy, with an excited, pounding heart, stimulated by the drama of man against monster, man against gravity, man against space.

About twelve seconds later, Herb's voice came over our in-flight radio channel.

"Tiger One, this is Tiger Two coming aboard, your starboard side."

"Roger," I said. "Let's go. Full throttle—destination Beaufort! Boy, this is living!"

Chapter 11

The Big Bailout-Trouble!

OVER NEW YORK, THE weather was immaculate, not a cloud in the sky. From our altitude, the great metropolis was an impressive, strangely miniature sight. We could see the entire city, from its northern border at Yonkers to the tip of Manhattan. You get the feeling that this enormous mass of mortar and concrete and black-ribboned streets must have taken centuries to build; you even feel its importance as part of America. Yet, paradoxically, from nearly nine miles up, it looks like such a simple, quiet place, everything neat and well organized. It is geometry glorified.

Soon we were over Atlantic City, where the sky began to get a bit hazy, with scattered and broken clouds. As we approached Norfolk, Virginia, I noticed that the entire area was covered with the dark, massive, rolling clouds of a thunderstorm. I looked at my wristwatch; it was now a few minutes before six P.M. In about half an hour, we should be touching down at Beaufort. I looked at the storm again. It appeared to be slightly higher than the 40,000-foot maximum the aerologist had reported at South Weymouth. I began thinking that we might have to climb a bit to be sure we'd pass over the top.

I called Herb. "Tiger Two, this is Tiger One. It looks as if Norfolk is catching hell. That's quite a storm down there."

"Sure is, colonel," said Herb.

"Glad we don't have to fly through it to penetrate."

In another moment, I called Herb again, "Tiger Two, let's go into an easy climb here, just to make sure we get over the tops." We went into full power for a steady, easy climb.

As student aviators, we had been constantly reminded about the dangers of flying through thunderstorms and were taught to recognize them almost instinctively. As a graduate of the Navy's all-weather flying school at Corpus Christi, Texas, where I had acquired an extensive knowledge of weather, I had learned without the need for personal experience, to have a healthy respect for thunderstorms, and one of the things I appreciated in becoming a jet pilot was that I could often climb well above a thunderstorm and never again have to go through one. Once, in an F4U *Corsair*, at about 8,000 feet, I had to go through a thunderstorm and the turbulence was so violent that it knocked my plane over on its back. It was quite a struggle before I could regain control. After that incident, nobody ever had to remind me to avoid thunderstorms. And I remember when a Marine Corps flight of several *Corsairs* was trying to set a cross-country speed record and had been doing well, until they went through a thunderstorm. Not one of the planes got through. Some had to land in Ohio and Pennsylvania, and a couple were forced to bail out.

As I started my climb, I noticed that I was passing through the thin, wispy tops of the storm at 45,000 feet and therefore decided to continue climbing. At 48,000 feet, now well above the tops, I levelled off again, and soon Herb was abeam of me, about 500 feet off, not too tight, not too loose, a nice comfortable formation for a routine, uneventful flight.

We had just passed over the Norfolk *Tacan*, an electronic navigation check point, where we picked up a range and bearing signal, and I was making an

easy right hand turn to take up the next heading for Cherry Point, on a course of about 250 degrees. As I was checking my navigation frequency, I noticed that I appeared to be slowing down a bit, so I nosed over slightly to pick up speed. Assuming at least another half hour of flying time, I reached down to crank out my rudder pedals a little more; I wanted to stretch my legs, feel comfortable. Then I started to ease into a cruise climb again, having noticed that at 44,000 feet I could see the tops of the clouds ahead. I had planned to go back to 48,000 feet, and I was just passing the 47,000-foot mark, still climbing, when suddenly I heard a thump and a rumbling sound behind and under me.

I quickly scanned my instruments. I was at .82 Mach, and nothing appeared to be wrong. My rpm instrument indicated no loss of power. But still I sensed that something was about to happen. I had flown too many hours in an F8U not to recognize that the "thump" and "rumble" were abnormal sounds. I glanced out to my right, noticing that Herb was at my two o'clock position, slightly down. I was about to call Herb to let him know that I was anticipating trouble, when I heard the thump and the rumbling sound again. Suddenly, the fire warning light flashed on.

There are a number of warning lights in the F8U, each one serious; but the fire warning light, about the size of a quarter, is the one that unnerves pilots most. It flashes on in a bright, traffic-light red, silhouetting four black letters: FIRE. It is connected to an electronic sensing system which warns that somewhere in the plane there is excessive heat where there should not be, and there may soon be a fire, or a fire may already have started. Usually, it means trouble somewhere in the engine system, in which case the warning light is tantamount to an order: DON'T WASTE TIME. EJECT!

Once before I had experienced a fire warning light, in the F9F-2; but it had turned out to be a false alarm. In fact, most pilots had considered the F9F fire sensing system so ultra-sensitive that we'd disconnect it to avoid continual scares. I knew several pilots who had ejected instantly from the F9F upon getting the fire warning flash, only to learn ruefully that there had been no fire. But in the F8U, the fire sensing system is extremely efficient and when the light flashes it is critical.

There were a number of emergency actions I could take, but my life might depend on picking the right one—my diagnosis had to be rapid as well as accurate. Instinctively, I took the first emergency measure immediately—cut back on power!

As I came back on the throttle, I pressed my microphone button, placed conveniently on the throttle, and called Herb.

"Tiger Two, this is Tiger One. I'm having engine trouble. Stand by. I might have to eject." At the moment, I wasn't certain I'd have to go out, but, in case I did, I wanted to be sure that Herb would see me and make the necessary reports to effect my rescue—or recover my body.

Herb replied instantly. "Roger, Tiger One. If you have to go, let me know." That was my last communication with Herb.

Quickly, I scanned the instrument panel in front of me. Retarding the throttle apparently had been effective. The fire warning light had gone out. Momentarily, I felt a great sense of relief. But then my rpm indicator started to unwind rapidly, frighteningly. In a matter of five to six seconds, the rpm indicator went from about ninety per cent to zero! I had never seen it happen that fast.

I have had jet flameouts, in which the rpm indicator runs down, but gradually. When it happened, I'd dive down to a denser atmosphere to get a re-

light, each time successfully. But in this case I quickly had to rule out an emergency dive for a re-light because the symptom, the rapid rpm unwind, did not fit a diagnosis of flameout.

Still scanning the instruments, I was convinced that I was having a one-in-a-million kind of emergency, "engine seizure." Something, some awful friction, perhaps because of loss of oil, had caused the excessive heat, had caused the engine to "freeze"; no engine, no power, no radio. The sudden disappearance of the characteristic crackling noises in my radio headset gave me, for a moment, an awesome feeling of loneliness; nobody to talk to, not even to hear me cry, "I'm going out."

But in a crippled high-performance, high-altitude aircraft, sweeping up past 47,000 feet, only a few thousand feet from the dividing line between earth's atmosphere and true space, you don't waste precious time on personal thoughts. In air so "thin" that scientists maintained it would cause the blood in an unprotected human body, literally, to boil, you don't feel an urge to clasp your hands in prayer. You're much too busy fighting for your life.

At this moment, my life depended on an accurate diagnosis, and thinking about the engine seizure was bad enough. I had experienced engine seizure only experimentally in an F8U, when oil was deliberately drained from an engine on a static-stand test. Although the engine had been going at maximum power, after the oil was gone the engine "seized," froze solid, in seven seconds!

Without an engine, I'd need not only electrical power, but hydraulic power to control the plane. The control stick on the F8U is irreversibly linked to the hydraulic system. Moving at supersonic, even subsonic speeds, the forces on the surfaces are so great that not even a Hercules could exert sufficient pressure on the control stick to guide the plane. Hydrau-

lic pressure is essential; without it, you might as well think of yourself as riding an uncontrollable rocket. One, you know, that is apt to "tuck" and carry you down at fatal supersonic speeds; or suddenly whip into such a ferocious spin that the g-forces will hold you pinned to your seat, your arms practically plastered to the bulkhead. A spin in an F8U is a particularly grim possibility because you sit at the extreme forward tip of the fuselage, where the spin achieves ultimate violence.

With the engine dead, my next action was automatic—pull out the auxiliary power package, which is an air-driven turbine. Built into the side of the airplane, it flops down from a long-piano-hinged pocket and the force of the rushing air turns the turbine, generating power. The power package also actuates an emergency hydraulic pump, enabling you to maintain control.

I reached over to the left side of the cockpit, grabbed a small T-shaped handle (something like the handbrake in an auto) and pulled to release the auxiliary package. The handle moved the prescribed distance—but nothing happened. There had been, in my lifetime of flying, several instances in which I had to pull out my emergency power package, and it had never failed. I had gotten to know its characteristic *thump* as it flopped out the side of the plane and hit the slipstream, causing a slight, familiar yaw. But now I felt nothing, no thump, no yaw. Perhaps it *had* flopped out; perhaps I was too preoccupied to hear the thump, feel the yaw. But my generator showed no indication of power. Nor did any of my other instruments show signs of power; nor was there any indication of hydraulic pressure. Previously, I had seen power come on instantly from the emergency package. Perhaps I hadn't pulled hard enough.

Quickly, I reached over to pull the handle again, hopefully, with greater force. But the handle came

completely out of the wall! It couldn't be! I didn't want to believe my eyes. But there it was, the handle in my hand. I let it drop to the deck.

A chilling feeling of helplessness crept over me. This complex leviathan of flaming flight, now dead and cold, a coffin of steel, was still carrying me upward in a climb, was making a mockery of all my years of training. There was nothing more I could do. I could not even dive to a lower, safer level for ejection.

But I could not remain much longer. Still climbing and still subsonic, I was in a highly favorable position for ejection. Yet at any moment one of two things might happen in the climb: running out of airspeed, the plane might stall and fall off into a wild spin; or it might suddenly tuck and go down at supersonic speed. In a flash, the thought of the civilian test pilot who had ejected at supersonic speed and had become, in effect, a living vegetable, whipped through my mind. I thought also of those few occasions when, in an F8U, I had fallen into mild spins and could recall vividly how strong the g-forces had been. I had been almost unable to lift my arms to maneuver out of those spins. No, I could risk neither an ejection at supersonic speed, nor from a wildly spinning airplane.

Meanwhile, as I had later learned, Herb had been trying to contact me on the radio. Unable to do so, he called the Norfolk control center, said, "Emergency in the area; pilot has ejected," and gave the necessary information.

Now it was my moment of decision, the most harrowing decision of my life. I had never heard or known of anyone having ejected at this altitude, at any speed, supersonic or subsonic, with or without a pressure suit or some protective clothing. The temperature outside was close to 70 below zero, and I had on only a summer-weight flying suit, gloves,

helmet, Marine field shoes. Perhaps I would survive frostbite without permanent injury, but what about "explosive" decompression at almost ten miles up? And what about that thunderstorm directly below me? If it could be hazardous for an airplane in flight, what would it do to a mere human? And a dozen other "what abouts . . . ?" crowded into my mind.

From the time I had heard the first indication of trouble until this moment, no more than twenty seconds had elapsed, although it seemed as if I had been acting and thinking for hours. I took one final look at the instruments and made the decision—EJECT!

Chapter 12

The Big Bailout-Free Fall

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 force 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. Again 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 reading 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 cartwheeling; 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'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 1,000 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, helment, 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 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, tak-

ing 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 quite variable, my 'chute might have opened not at the 10,000-foot level, but higher or lower, since the 'chute's barometric sensing device could have been "fooled" and might have opened too soon or late.

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 a while; 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.

Chapter 13

The Big Bailout- In the Storm

ACCORDING TO *Science,* the professional journal, when the joint three-year research, "Project Thunderstorm," was launched, the program was designed "to obtain a complete description of the thunderstorm and to measure its intensity. The turbulence or bumpiness and the broad up-and-down motions of the air were considered the most important items to be investigated. . . ."

Too bad we cannot turn back the clock. I could have given them a first-hand description, I could have told them about the turbulence, and the bumpiness, I could have told them about ups-and-downs; and I could have told them about sights and sounds and sensations. I could have told them about the choas, the hell on earth, the roaring, searing, flashing violence that we call a thunderstorm. I could have been the researchers' first, and perhaps last (I hope it never happens to another human!) eyewitness, fresh out of the churning test tube.

I could have told them that even from one who had survived the unbelievable torture of a thunderstorm, the fright of it, the terrible physical beating, the twisting and turning and tumbling, the awesomeness of lightning so close it could almost be touched, the vibrating horror of thunder never meant for human ears, the fierce pounding of hail, the drenching of rain so torrential it might just as well have

been an ocean suspended in air—all this, I would have told them, could never be adequately described for it is an experience with which a mere human has nothing to compare on earth.

My entry into the throat of the storm came—as almost always the storm itself comes on earth—gradually.

The first reminder that I had fallen into a thunderstorm was the relatively mild turbulence I had felt just prior to and immediately after my 'chute had opened, although after the 'chute had opened the turbulence felt somewhat stronger, perhaps not quite strong enough, however, to think of it as turbulence, as violent churning. I thought of it as updrafts. It was as though I had been suddenly taken up in an elevator, two or three rapid rides in succession, each ride a brief but speedy one, ending quite suddenly, with the strange feeling of zero g, and a feeling of weightlessness. But when the "updrafts" increased in frequency and strength, I knew it was the turbulence of the storm, the powerful, massive blasts of air which have inspired scientists to describe thunderstorms as, "in effect, a large heat engine," having "strong updrafts and downdrafts thermally driven by differences in air temperature," and in which "engine" it would not be unusual for a large body, such as an airplane or a human being, to be shot up at the rate of 100 feet per second.

After the first few shocks of turbulence, virtually straight up-and-down actions, I felt a queasiness in my stomach. For me it was a strange feeling because, in spite of literally thousands of hours in the air, in all sorts of airplanes, under all sorts of weather, combat and training conditions, I had never suffered motion sickness. Still, I was neither disturbed nor frightened. I had been through much worse in an airplane, wherein my principal concern had been not drifting safely down in a parachute, not a little

discomfort, as now, but wrestling the turbulence for control of a big, complex machine.

But my mind changed rapidly after I was hit by the first real shock from nature's "heat engine." It came with incredible suddenness—and fury. It hit me like a tidal wave of air, a massive blast, as though forged under tremendous compression, aimed and fired at me with the savagery of a cannon. I was jarred from head to toe. Every bone in my body must have rattled, and I went soaring up and up and up as though there would be no end to its force. As I came down again, I saw that I was in an angry ocean of boiling clouds, blacks and grays and whites, spilling over each other, into each other, digesting each other.

I became a veritable molecule trapped in the thermal pattern of heat engine. I was buffeted in all directions—up, down, sideways, clockwise, counter-clockwise, over and over; I tumbled, spun, and zoomed, straight up, straight down and I was rattled violently, as though a monstrous cat had caught me by the neck, and was determined to shake me until I had gasped my last breath. I felt all the painful and weird sensations of the g-forces—positive, negative and zero. I was pushed up, pushed down, stretched, slammed, and pounded. I was a bag of flesh and bones crashing into a concrete floor, an empty human shell soaring, a lifeless form strangely suspended in air. During moments of zero g, I could recall the times when map cases, note paper, and pencils had floated in the cockpits of my jet planes, and now I felt as though I were as helpless as those inanimate objects. The rapid changes between positive, negative and zero g were sickening. I know I vomited time after time. It was maddening, and I felt as if I were not only fighting for my life, but my sanity as well.

At one point, after I had been literally shot up like

a bullet leaving a gun, I found myself looking down into a long, black tunnel, a nightmarish corridor in space. Sometimes, I didn't want to see what was going on. I kept my eyes shut, tight. This was not turbulence. This was nature's bedlam, an ugly black cage of screaming, violent, fanatical lunatics, having a game with me, tossing me about, beating me with big flat sticks, roaring at me, screeching, trying to crush me or rip me with their hands. One sensation I'll never forget: I remember it as the "accordion," being squeezed simultaneously from top and bottom.

Several times—I could not believe it at first—I felt as though I had been looping around my parachute, like a pendulum. But it was no gentle to and fro swing. I went up, out, around and down as if on a speeding centrifuge. I could feel blood rushing to my feet, then my head. Practically, I would not have known whether I was upside down, or otherwise oblique, except that I could "sense" it by the centrifugal force on my body.

There were times when I simply would not believe that my parachute could withstand the strain. Something had to give, the risers, the shrouds, perhaps the buckles on my torso harness. Once or twice, perhaps more often, my 'chute seemed to lose its precious "billow" and I thought it was a miracle that I did not go streaming toward earth with a long, narrow white tail, my collapsed 'chute. I had quick visions of myself crashing into the earth, a helpless mass of flesh and bones wrapped in a white shroud.

This punishment, I thought, *is overwhelming. I'll never survive. No one could survive it. What supreme irony—to come out alive from "explosive" decompression, to maintain consciousness all the way down, only to be battered to death by a thunderstorm. When they find my body, they'll never know how I died. The pathologist might say that I died of shock,*

or that "explosive" decompression had been too much for my heart. What a pity I shall not be there to say, "No, no, no. The explosive decompression was bad, painful. But it did not kill me. The frostbite was agony, but it did not kill me. It was the raging storm that tore the life from me."

There were times during my decompression pains when I did not feel too confident about survival. But they were not strong feelings of despair. Stronger were the feelings that I'd pass out and not remember what had happened to me, not remember the details which the flight surgeons and the aero-medical experts might like to learn about. Now, however, I was absolutely certain that I was having my last thoughts on earth. I no longer wondered whether I would die, but how I would die.

However, I was not quite prepared to give up the fight. Sometimes I found myself grasping the risers of my 'chute, as if this would help me hang on to life itself. At one point I crossed my arms over my chest, as though I were trying to hang on to myself.

During the turbulence I clung to hope because I felt I had become or might become a part of the storm's pattern, blasts of air shooting up then down, but not always straight down. Some air would "spill" over the top of each rising current, out and then down, as in the shape of a broad mushroom. I might "spill" over with the air and if that were the case, sooner or later, I'd be released from the vortex and float down. In the process, I might be swept across dozens of miles of land, perhaps hundreds of miles. I might end up in Pennsylvania or New Jersey—or over the ocean!—wherever the storm itself might weaken or "die" and eventually disgorge me. But I didn't care where it would happen, so long as it released me.

Before long, however, I found that the storm had allies with whom I had to do battle, physically and

mentally: thunder, lightning, hail and rain.

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 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, hail-storms 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!*

Chapter 14

The Big Bailout-Rescue

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 treetops. 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 left side of my head and face felt bruised, as though I had just struck a stone or a log. For about ten or fifteen seconds I lay stunned, feeling as if my entire body were paralyzed. But I knew it wasn't when I deliberately lifted a leg, then a hand as a test. I was more emotionally limp; overwhelmed with an enormous sense of relief that the worst ordeal of my life had come to an end. I had just been released from hell. The sanity and the peace and quiet of the world outside was almost too much to take. I was battered, drenched, frozen, bruised, and exhausted. I wanted to feel the succor of the soft, rain-soaked ground, to hear the soothing sound of wind rushing through the branches and boughs softly scraping each other. And I wanted to fall asleep right there on the forest floor.

After about a minute, the pains reminded me that I was still in trouble. My entire body ached severely, especially my back, arms and head. Feeling myself, I discovered my eyes, nose and cheeks were swollen, my left side badly bruised, and my entire face generally raw, sensitive to touch. I had no idea what

might have been wrong with me, what vital organ might have been seriously injured, nor how much I might have been bleeding internally, if at all. I didn't feel as if I ought to stretch my luck. I thought: *Better get medical help and get it soon. Don't lie here doing nothing. It's not all over yet. Maybe a rescue party is looking for you now; maybe not. They may find you—too late. Get going. Get out of here.*

I looked at my watch. In the dim light, I could barely see the luminous hands: 6:40 P.M. A descent that should have taken about ten minutes, took forty minutes! *Don't drag it out any longer. Get moving.*

Stiff, shaky and shivering, I rose to my feet. It was still raining. Apparently, the forest floor had absorbed all the water it could and was now soft and slushy. I felt as though I were wallowing in water up to my ankles, making my already uncertain balance more difficult. I took a few steps and stumbled and then yelled, still on my knees, "Hey! Hey, HEY! Anybody out there? HEY! OUT THERE! ANYBODY!" My cries drifted away unheard among the dark trees. *Nobody's here to help me. No time to waste. I'll get started, now; I'll get the hell out of here myself.*

I looked up and noticed that my 'chute had been snared in the trees. It had probably cushioned my landing but also accounted for the pendulum-like swing that smashed me against a tree trunk. I tried to unleash myself from the parachute, my numb, raw hands complicating the effort. I struggled with the quick-release snaps on my torso harness and finally managed to open them, getting out of the 'chute. But it was difficult. My hands were stiff. I felt dazed and weak, as though I had lost a great deal of blood or was still losing blood. *You need medical attention, fast. Don't play around. Get out of here as fast as you can.* It dawned on me that if I should pass out in the woods the parachute might lead rescuers to me. I left it where it was.

My knife in my hand, I turned to walk and stumbled into what seemed like a dense jungle of underbrush. A strange, alien feeling took hold of me, and I realized that I was, for the first time, getting panicky. Perhaps I was overanxious. It was constantly on my mind that having survived the ejection and the storm, having now returned with information that might prove of value to other aviators and flight surgeons in the supersonic age, I still might die in some silly, superficial manner, that would be like slipping on a banana peel after scaling Mt. Everest.

But I caught myself, stopped, straightened, took a deep breath and admonished: *Now, calm down; get hold of yourself. Do what you've been trained to do. You're a survivor. You need medical help. You're lost. Nobody's around to help you. Find your way out and move in a direction where you might find someone to help you.*

I decided to lighten myself as much as possible. I took off my life vest, walked a little, then removed my torso harness. I kept my helmet on as protection against the rain, as protection against injury if I should stumble or pass out, and as a possible means of identification if I should get into the open. My knife, large and heavy, almost like a small machete, I kept in my hands at the ready for an emergency. Not knowing where I was, I did not know what I might have to do, what animal I might have to fight, or scare off, or kill.

I remembered having seen an open field from the air, but now in the dense underbrush I had lost my sense of direction. It reminded me of jungle I had seen in the South Pacific, more thick underbrush and vines than trees. I noticed what appeared to be a large tree stump, its top smoothly cut, as by a saw. I could feel the smooth surface more than I could see it; and I noticed a few more stumps like it. I reasoned that this area had once been visited by lumbermen

who would have needed a logging road to remove the fallen trees. *Find that logging road. It will lead you to something, possibly a main road.*

Thinking like this was stimulating, reassuring. I had calmed down, had recollected my trained instincts. *Next? Start a square search. If there's a logging road, that's the quickest way to find it.*

A square search is something like walking around in a "circle," except that you walk a specified distance, a "leg," and then make a deliberate ninety-degree turn, and so continue increasing the distance covered on each leg. In effect, you walk a square bullseye, which enables you to overlap an area without walking around the same "circle" all the time. I started on a leg of fifty paces, made a ninety-degree turn, increased the next leg to about 100 paces, made another turn, then covered a leg of some 150 paces and continued on ever-increasing legs.

The ground was soft, slippery and dotted with pools of water. I stumbled more than I walked. I didn't realize it at the time, but I stumbled from loss of equilibrium as well as weakness. Finally, on about the third leg, I discovered what might have been a logging road. It probably had not been used recently, I realized, since it was under a light growth. But I could see vehicle tracks, deeper in one direction. Obviously, the deeper ruts had been made by greater use; at least it was possible. I followed those ruts and continued stumbling, pushing vines and underbrush aside. Within a few minutes, I came upon the open field I had seen from the air. It was a cornfield with stalks some four feet high. Looking over the tops of the cornstalks, I could see what appeared to be running headlights of automobiles. A road! I half ran, half stumbled through the cornfield toward the road, perhaps a quarter of a mile distant, and up to my knees in water, came upon a steep gravel incline. I crawled up on my hands and knees,

reached the hard surface of the road and slowly rose to my feet. Looking up and down the road, a narrow black ribbon without white lines, I could see cars coming from either direction, and about a mile in one direction the only other sign of civilization, a lighted house. I deliberated for a moment. *Try to stop a motorist or get to the house?* But it's raining hard. Your balance is off. You're feeling weak. You might not make it to the house. You might collapse on the road, get run over, or fall off the road, into the ditch. Stop a motorist; ask him to get you to a hospital.

I was not aware then that standing there in the heavy rain, at the edge of a black road, in late, almost purplish twilight, in my tattered flight suit and Buck Rogers helmet, my face swollen and raw, blood caked on my face, still oozing a bit from my mouth, nose and ears, a large naked knife flashing in my hand, I must have been a startling if not frightening sight. Many cars, coming at the rate of about one or two every three or four minutes, passed me without so much as a second glance. Indeed, it seemed as if some of them, upon seeing me, stepped harder on the gas pedal. One woman tossed me a friendly wave in answer to my arm pumping.

I looked continually in the direction of the lighted house. It was only dimly lit. Should I try to make it there? But I could not discern any activity connected with the house. I was afraid I'd get there, not find anyone home, and having expended reserve energy, collapse in some out-of-the-way place. Unseen for hours, I might die. I was then shaking violently from the cold, perhaps shock.

Desperate, I decided that if the next few cars did not stop at my signal, I'd lie down in the road and try to force someone to stop. As another car approached I began frantically waving my hands and running along the side of the road. I stumbled, rose, ran, stumbled. The car went by. I was on my knees

when I saw its red brake lights suddenly go on about fifty yards down, turn, and come back. When the car pulled alongside, the driver, a slender, neatly dressed man who appeared to be in his early forties, rolled his window down, just a bit, enough to talk. He apparently was acting with caution.

I staggered to the window. "Help me," I said. "I'm a pilot. I've just ejected from an airplane. Take me to a hospital." But there was no pleading tone in my voice. I spoke firmly, almost as if I were giving an order. I was in no mood for dilatory tactics and was fully prepared to force him to take me if he should have shown even the slightest indecision. Instead, he motioned for me to come around and get in the front seat. As I opened the door and the dome light went on, I could see four young boys in the back and a handsome woman in front, all neatly dressed.

The driver took off immediately, introduced himself as Judson Dunning, a farmer, the woman as Mrs. Dunning, his wife and a school teacher, and three of the boys, ranging in age from about ten to seventeen, his sons; the fourth boy, a teenager, a cousin.

Mr. Dunning, mild-mannered, soft-voiced, explained that they had merely been out visiting, taking a Sunday drive. He did not have enough gas to get me to the hospital, but would take me where he could call an ambulance. The boys began arguing among themselves as to who had spotted me first. It seems that one of them, recognizing my flight suit and helmet, had called out, "Dad! That's a jet pilot. He's in trouble. Stop. Help him." Mr. Judson had argued, but luckily only weakly, that the "jet pilot" was probably "some drunk in a crazy get-up." Nonetheless, he decided to yield to the wisdom and knowl-
edge of modern youth and turned back to take a second look at me.

I pulled off my helmet, tossed it into the back seat

and said, "Here, boys. Thanks. I owe you my life. There's your souvenir." (Later, I learned, Mr. Dunning and his sons, like good woodsmen, had been able to backtrack my escape route from the woods, recovered my parachute and survival pack, took it to their home and, pending my picking it up again, spread everything out on neatly arranged chairs in the hallway of their home, inviting neighbors and friends to visit the jet pilot's museum.)

Mrs. Dunning, her compassionate mother instinct showing, seemed very much concerned about my appearance, especially my dangling little finger and the blood on my face. She remarked that my face looked as if it had been terribly beaten, "raw as a lobster." I could feel the blood still trickling from my nose and one ear, but seeking to reassure Mrs. Dunning I told her that the only thing I was concerned about was my possibly broken finger. I did not bother to explain what I had gone through.

As we rode, Mr. Dunning talked about the storm. He said it was one of the worst storms he had seen in this area, where he had lived most of his life, and was gravely worried that it might have ruined his peanut crop. It had already caused considerable damage in the entire area. "It must have been tough, coming down in a parachute through it," he remarked. I nodded.

I told him that I didn't know where I was. He said I was in North Carolina; and he was taking me to a little town, Rich Square, where there was a private ambulance service which could get me to a hospital in Ahoskie. I had bailed out in Virginia and had landed in North Carolina.

After what seemed like a ten-minute ride, we pulled up before a modern version of an old-fashioned general store. The entrance was beyond a wooden porch, a few steps off the street level. Outside the store there were a few men, their shoes off, pants

rolled up, sloshing through water. Mr. Dunning took off his shoes, rolled up his trousers, went into the store, saying he'd call the ambulance.

I sat tense and anxious and when nothing seemed to be happening I went into the store. Mr. Dunning was talking with a man who appeared to be the proprietor, middle-aged, in a blue-denim shirt, talking very calmly, almost casually, as though it were every day in the week that he made emergency ambulance calls for jet pilots in trouble. He glanced at me with only the mildest interest and resumed talking with Mr. Dunning.

I was annoyed. Mr. Dunning, a very gentle man, did not seem to be getting the sort of fast action I wanted. Standing at the door, I looked firmly at the proprietor and said, "I want help. Will you get on the telephone and call the ambulance?"

"Well," he said, almost lackadaisically, "I'd like to do just that for you, dontcha know. But we've been having a mighty big storm around here, a real bad one, dontcha know. And the lines are down. Can't get through on the telephone. . . ."

I couldn't take his Lum 'n' Abner calm. I was exhausted. "May I lie down," I interrupted. "I'm tired. I need rest. " I went off to a side of the store and sprawled on the floor. Some of the men looked strangely at me, as though they could not understand what sort of creature I was or what was wrong with me. I could sense that they were also having troubles of their own on account of the storm.

I lay, exhausted, on the floor for about ten minutes when I looked up to see a state highway patrolman entering, accompanied by a man who had apparently been hurt in an auto accident. I got up, and told him I was a Marine aviator in trouble and needed to get to a hospital immediately. But, somehow, he had already learned of my emergency and had called the ambulance.

I had been thinking about trying to get to Norfolk, where I felt I might get more appropriate medical attention from a flight surgeon, but I felt too weak to either explain, beg, or argue. I decided to let them take me to the nearest hospital in Ahoskie. They had told me that it was a long way to Norfolk and bad driving.

The ambulance came within a few minutes, and as I lay down in it, I could see Mr. Dunning coming in to escort me on the ride to the hospital. In his kind face I could see that he was concerned about me, that perhaps he feared I was getting panicky and might need someone along to soothe me.

Even in the ambulance, my instincts for survival remained on the alert. As we rode along, I could feel that the ambulance was going much too fast. When it went over bumps, I'd feel it sharply, painfully in my back. When I saw the water spraying up past the windows every time we went through a puddle, I knew we were going too fast. I tapped the driver on the shoulder and said, firmly, "Take it easy. After what I've been through I don't want to get killed in an ambulance on my way to the hospital." He turned for a moment, smiled wanly, and nodded.

At the hospital, a surprisingly large one for a small town, I walked haltingly to the emergency room, where apparently a doctor and nurse had been waiting for me. I explained what I had been through, but from the doctor's blank, almost puzzled expression, I got the feeling that beyond routine first-aid and a physical examination for internal bleeding and possible fractures, he did not know exactly what to look for in an emergency of this sort.

Getting up on the examining table, I asked the doctor to take a look first at my dangling finger. "I think it's broken," I said. He looked at it but said, "No, I think it's just a cut tendon. We'll take care of

that right away. I'll give you something first to help you feel better." He gave me a hypodermic sedative, which he said was "enough to knock out a horse," but it had little effect; there was too much adrenalin in my blood.

After he had stitched my finger, he went over my body and expressed astonishment at the unique "lines" in the skin. During decompression my body had apparently swelled so much and had pressed so tightly against the seams of my flight suit, that the identical seams were clearly impressed on my skin, as though I had been stitched together with bluish-red thread.

When the doctor completed his examination, I was wheeled to a small room and placed in bed, with a reassuring goodnight from the doctor and the nurse, who said I'd be fine in the morning.

I mumbled a thank you, goodnight, and was about to place my head on the pillow when I shot up suddenly. "The airplane!" I exclaimed, "What happened? Call the State Police. They should know by now. Find out. *Please.*" I was shaken at the thought of what might have happened when the plunging monster hit the earth. Within a few minutes I had the consoling answer. Apparently, the highway patrolman, feeling that I'd be anxious about where my airplane had crashed, had telephoned the hospital to relay the message that nobody had been hurt. The plane had been seen to crash by several eyewitnesses and it had been located in a wooded area near Scotland Neck, North Carolina. But all that remained of it was a few metallic parts lying around the blackened rim of a huge crater, in which little fires were still burning. The plane had almost vaporized. A guard had been set up to preserve the site for what the patrolman knew would come, an accident investigation and report.

The doctor added that he had also been in tele-

phone communication with a flight surgeon and after a rather long consultation on my wounds and symptoms both had agreed: All that could possibly be done for me now had been done and that I should just go to bed, get a good night's rest for the return trip next day to a Naval hospital.

Greatly relieved, I thanked the doctor and hit the pillow for what I thought would be a sound sleep. But all through the night, almost every hour on the hour, it seemed, a nurse came in, woke me, took my pulse and blood pressure. I knew what they were concerned about, and apparently the doctor had been alerted to it by the flight surgeon. Some months before another jet pilot had survived an emergency no-pressure-suit ejection at 40,000 feet—only to die in the hospital on the night of his rescue. He had died in his sleep, apparently as a result of undetected ruptured internal organs. They weren't going to let the same thing happen to me. Neither was I. I slept fitfully, waking often to take my own pulse; but each time it was frighteningly rapid. *Oh, forget it!* I thought finally, and went to sleep; overjoyed to be alive, in safe hands.

Chapter 15

Airborne Again

EARLY MONDAY MORNING, *July 27, 1959:* Hardly more than twelve hours had elapsed since the moment I had been shot out of my airplane nearly ten miles up. But the wheels of military efficiency had already begun to roll. I had been informed:

That an AAR team (aircraft accident report) had been dispatched to gather whatever parts of the airplane might be salvaged, making use of picks and shovels and a bulldozer at the crash site;

That another team had been sent out to locate and question eye witnesses and take affidavits;

That a Naval flight surgeon and a fellow officer were on the way to Ahoskie, via helicopter, to take me to the hospital at Cherry Point.

When word of the helicopter mission spread, the entire town of Ahoskie almost shut down. Merchants, housewives, children, workingmen in overalls, office clerks—all came out for the "festive" occasion. They were amply rewarded. Two helicopters landed on the hospital lawn.

After consulting with the Ahoskie physician, the Naval flight surgeon decided to arrange for an ambulance to drive me back to Cherry Point. They apparently had been concerned about my severe back pains. I objected to the road trip instead of helicopter but was overruled by the flight surgeon. Still the pain in my back during the ambulance ride

was so severe that the surgeon at one point had to request the driver to pull into a service station where he obtained a glass of water for me and gave me an oral sedative.

After we had arrived at Cherry Point and I had been taken to a hospital room and made comfortable, I felt so deeply exhausted that I merely wanted to sleep and sleep and be left alone.

When I awoke the following morning at 6:30, however, I made a discovery that caused me considerable distress, which was to last for weeks—until I had proved I would be able to fly jets again. It began when a nurse advised me that I was to have a visit by a couple of Marine Corps generals and the chief flight surgeon. I decided to clean up and shave. As I walked toward the bathroom, I found that my equilibrium had been affected. With my eyes closed, I lost my balance entirely. With my eyes open, I could not walk with stability unless I had a reference to some vertical line, such as a nearby wall or the corner of two walls. I said nothing about it. Instead, I called a hospital corpsman and asked him to assist me to the bathroom to help me shave. He stood by, occasionally steadying me, as I washed and lathered before a mirror. But as soon as I had put the lather on, it felt as if my entire face were an open wound and I had just poured iodine into it. I howled in pain, quickly wiped off the lather, forgot about trying to shave and went back to bed. I thought for a long time about my abnormal equilibrium which, if a result of some injury to my inner ears, might ground me, for a long time, perhaps for ever. It was a haunting thought.

About two hours later, a flight surgeon came to see me. He was one of the Navy's leading aero-medical experts and I had known him for about ten years. He said, "Bill, we have checked your case details and the records and we can find no case similar to yours.

No doubt, you have survived the highest emergency ejection and the roughest on record. And physical fitness has certainly paid off for you. If you had not been in excellent physical condition, you might not have survived."

The physicians at the Cherry Point hospital must have decided that I'd be better off in a familiar environment for reasons I was not aware of at the time. They had me transferred to my old base, at Beaufort. Apparently, they had discerned signs of personality changes, which they had attributed to possible mental shock or nervous system damage; and they had detected a form of forgetfulness, which the doctors later described as "mild retrograde amnesia," affecting my memory for events, places and persons known to me within the three months preceding the emergency ejection.

Perhaps my first clue to these symptoms came at Ahoskie where I had felt more fractious, less good humored than usual, and had experienced difficulty in recalling some of the details of the ejection. I had, for instance, confused dates and had almost forgotten that Herb Nolan had been on the flight with me. But there were other clues.

Shortly after I had arrived at the Naval hospital in Beaufort, the old friend who had helped me put Squadron 122 together, Col. Jack Dalton, came to visit me at my room. As he entered the door, I addressed him by the wrong name, although I quickly corrected myself. Also, that night I telephoned my brother in Pittsburgh to assure him that if he should have heard of my accident not to worry, I was all right now.

"Are you *sure* you're all right?" he asked.

"Of course," I said. "Don't you believe me? Why do you ask it like that?"

"Well, Bill, then why did you call me again to say the same things? You called last night."

For a moment, I was stunned. I didn't know what to say. I concluded the conversation casually, but returned to my room in a somewhat dazed condition. *Did I call him last night? Must have. He wouldn't kid me. Why am I so forgetful?* Now, I had something else to worry about in addition to my abnormal equilibrium, which the doctors at Beaufort soon discovered, after having given me several balance tests. Had I suffered anoxia, oxygen deficiency while coming down? Was my brain damaged? I never asked the doctors. I preferred to wait and see.

In the weeks to follow, I was subjected to every medical test imaginable and was kept under constant observation by a small army of physicians, including flight surgeons, cardiologists, orthopedists, general surgeons, and EENT's (eye-ear-nose-throat).

At first, they seemed to be seriously concerned about a slight abnormal reading on my initial electrocardiogram. Not knowing what might develop, perhaps fearing a sudden heart attack, they watched my cardiovascular system carefully and took a series of electrocardiograms until my heart readings had apparently returned to normal. I learned later they had been checking carefully for anoxic heart damage.

Another troublesome development I discovered in the hospital was a numbness in the sub-pubic and surrounding area. The doctors attributed it to nerve damage, possibly done by the harness straps across my thighs. In time, however, normal feeling returned.

After more than two weeks of intensive examinations, X-rays, and observations, however, the doctors were satisfied—and somewhat astounded—that I had suffered no serious internal damage, apart from severe bruises, lacerations, the badly cut little-finger tendon, generalized swelling (especially of the eyelids), slight subconjunctival hemorrhage in one eye, some early difficulty in focusing on small newspaper print, widespread discoloration of skin (mainly due

to frostbite), generalized sprains and strains of ligaments, joints and muscles (which accounted for the painful backaches). Gradually, my equilibrium and memory returned to normal.

Apparently, I had been under extremely close observation, since one doctor finally reported that there was no longer any concern over "the possibility of cerebral anoxia having caused significant brain damage as manifested by personality change." I did not know until after I had been discharged from the hospital that the doctors felt I had not calmed sufficiently during my early stay in the hospital. They had prescribed tranquilizers for my "nerves" and also to help relieve muscle spasms.

From the steady parade of doctors that came to see me, some just to talk, others to make extensive examinations, I knew they had considered me some sort of medical human guinea pig, which they were not likely to see again for a long time, if ever. A rather well known Naval flight surgeon, himself a jet aviator, told me that he didn't think there'd "ever again be another case like yours, Bill, in the history of manned aviation." After I had been given ambulatory privileges in the hospital, I was asked to give a talk to a gathering of all the doctors in the hospital, which I did, answering questions. Mainly, the doctors asked detailed questions about my responses and sensations during the period of "explosive" decompression and the free fall through frigid sub-zero air. They also solicited my responses to questions relating to how I had reacted and felt during the positive, negative and zero g stresses in the thunderstorm.

Day by day, I was overjoyed to receive good news about my health. No heart damage. No bone fractures. No spinal injuries. No serious ear or eye damage. No anoxic trauma. Blood and urine tests, negative. Internal organs normal.

I was also gratified by something that had nothing to do with my health. AAR investigators had come during the first days with tape recorders to question me in detail about the accident, primarily to uncover, if possible, any information that might be of value to the future safety of military aviators—routine procedure.

I was, in the first instance, most pleased that I had been able, each day, to recall incidents in great and important technical detail, particularly with regard to various instrument readings—except for the oil pressure. Having had difficulty recalling personal details, it was a source of reassurance to me to know that I had not forgotten what had taken place in the airplane. But when all the accident data had been finally analyzed, I received my biggest personal thrill. All the experts, including factory engineers, had agreed that my engine indeed had "seized."

The proof was a piece of real evidence. Although the plane had practically vaporized on impact there were a few small parts found in and around the crater. One was part of the engine-driven fuel pump. The teeth of the pump drive gear had been driven forward to make a perfect imprint on the face of the driver bearing. The edges of this imprint were sharp and clear, just as if they had been stamped with a die. From this, the engine experts concluded that the engine was not turning on impact and had, indeed, seized. Later, it was officially decided that I had experienced a true emergency, had analyzed correctly, and had taken proper action—my twenty-second decision had been right.

There were some days when I felt as though my ordeal in the thunderstorm was nothing compared with what I had to suffer in the hospital, namely the seemingly interminable parade of newsmen and feature writers from all media, all seeking interviews, all asking the same questions over and over, nearly

all asking banal personal questions calculated to demonstrate that I had been some sort of hero, or brave man. Very few paid attention to my disclaimers of personal glory or to my insistence that I had been a most unwilling "hero" and that I had responded as any well trained aviator might. Reluctantly, I had granted interviews because quite frankly I had hoped they would say some of the nice things I had always felt about the Marine Corps and Marine aviation and that perhaps my statements might in some small way improve the public's understanding of what Marine Corps aviation is, and what it means to be a military aviator in the supersonic age. After seeing the poor results in print—sometimes embarrassing results, as evidenced by some of the mail I had received, asking for my autographs, equating me with truly great men in aviation—the only comfort I could derive was that like all good Marines I had done my duty and had at least tried to serve the best interests of the Corps.

One of my good friends at the hospital, a charming blue-eyed, blonde nurse, proved particularly helpful during the early stages of my recovery. Knowing and understanding me, she had realized that I had been through a shocking experience and it had lowered my boiling point. She knew I had become too easily irritated, but she undoubtedly had sensed what I think was the real cause of it: My fear that I might not be permitted to fly again. To help me regain confidence, after I had been given ambulatory privileges, she'd drive me out to the airfield where she knew I felt most at ease watching the F8Us taking off and landing and flying about. She'd talk soothingly, reassuringly, always reminding me that the doctors had not found anything seriously wrong and that before long I'd be flying again. She was right; but it wasn't that easy.

After I had been discharged from the hospital

around mid-August, I was told to report periodically as an out-patient. They were not quite prepared to discharge me as fit for duty—flying duty.

First, there was a program of physical rehabilitation. I had to return for a series of physiotherapy treatments, and on my own I engaged in a regimen of calisthenics and exercises to strengthen my muscles, particularly my back. I had been unable to bend over much without considerable pain, although ordinarily I could do floor-touching exercises with ease and at great length. When I felt physically fit again, weeks later, the flight surgeon agreed that I could return to duty, if . . .

I knew what that "if" was and saved the flight surgeon the embarrassment of suggesting it by making the request myself, psychiatric clearance. I knew they wanted to be certain my mind had not been affected, although the flight surgeon hastened to assure me it was "routine procedure."

The following day, I reported to a psychiatrist at Parris Island and promptly discovered that he had been expecting to see me for some time. He had been well briefed on my accident and medical reports. It was with relief that I had discovered this because I had reached the point of being extremely piqued in discussing my accident with doctors, reporters, nurses, corpsmen and the ordinary curious. I mentioned this to the psychiatrist and he made me feel immediately at ease by assuring me that my reaction was a perfectly normal one.

He asked me to tell him how I felt, personally, confidentially, about flying again, particularly in supersonic jets.

Earnestly and quite confidently, I replied, "Doctor, I have no fears, no apprehensions whatsoever. I am, in fact, looking forward eagerly to flying jets again. Of course, I'd like to know myself what difficulties I

might encounter physically. But I have no fears about it."

"Well, that's good," he said. "At times, as you probably know, pilots do have apprehensions after an accident, particularly after one as brutal as yours and after a rather long layoff."

He said it with such an air of finality that I felt relieved. I thought it was all over, quick, to the point, a friendly chat. But it was not that simple. He put me through a series of tests which were perhaps elementary and fundamental to his analysis. It took a little more than an hour, but it was for me seemingly endless and with each test, not knowing the mysteries of psychiatric analysis, I grew filled with silent misgivings about whether he'd pass me as fit to fly again. If at times I may have appeared tense to the psychiatrist, his impression would have been accurate. I became increasingly tense.

I went over to the flight surgeon's office at the hospital. As soon as I entered, I knew that the worst —up to this point—was over. He was smiling. "Bill, you came through fine," he said. "As far as we're concerned, physically and mentally you are fit to fly, you may be returned to duty, if . . ."

Again, I anticipated his "if."

"I know," I interrupted. "I'll arrange for a pressure chamber test immediately."

This was to be my final hurdle. How would I now react, physically and emotionally, in a pressure chamber test, in which I would be subjected to all the discomforts of extremely thin air in a simulated high-altitude flight?

I asked the flight surgeon whether he'd join me in the pressure chamber, and he agreed.

Wearing only a flight suit, helmet and oxygen mask —as I had last entered the cockpit of an F8U—I entered the test chamber with the flight surgeon and a flight physiologist. Both were going to observe my

physical and emotional reactions—and make themselves handy for an emergency, if I should "black out," or perhaps panic. They would also note whether I might develop severe pains in my head, abdomen, ears, or sinus cavities; whether I might start bleeding from the eyes, ears, or nose, or experience difficulty in breathing. Any one of these symptoms would forestall my return to flying duty.

The flight surgeon and physiologist also wore oxygen masks, in which there are microphones for communicating with the pressure chamber controllers outside, and with each other.

The test pressure chamber is a small, square steel cube with a large airtight, steel door at one end and a thick window at the other end. Inside, hang oxygen masks from the ceiling (for emergencies) and on the wall there is an altimeter to indicate the atmospheric pressures of simulated flight. Hanging from the ceiling there is a balloon, which inflates or deflates according to the pressure in the chamber, in order that pilots and others may see visually what happens to their internal organs before, during and after decompression.

The flight surgeon and physiologist sat on bucket-type seats facing me. The chamber is narrow enough so that facing each other we could reach out and touch hands. While waiting for the test to begin, we scarcely talked. For me it was an important, almost grim moment and I know they did not want to add, even inadvertantly, to any tense feelings I might have had.

Finally, the door closed and we were hermetically sealed. We connected our oxygen hoses to the oxygen supply kept outside the chamber, and the flight physiologist asked if we were ready. The doctor and I gave a thumbs-up signal, and the physiologist told the outside controller to start the test. His voice came over the intercom in our helmets:

"Gentlemen, this is a prearranged simulated flight test. We are going to take you up at the rate of about 4,000 feet per minute until we get you to 20,000 feet; then we shall slow down to about 2,000 feet per minute, until we hit 35,000 feet. After that we'll climb at 500 feet per minute to 40,000 feet, maximum altitude, where we shall remain—and then give you a free fall to 35,000 feet.

"If at anytime, anyone feels discomfort or pain, give me a level-off signal. Is that all right with you?"

We all signalled, thumbs-up. In effect, he was going to subject us to a typical jet climbout to high altitude.

He turned a few valves and the flight was on. At 10,000 feet he asked, "Everybody o.k.? Give me a thumbs-up." We complied. He repeated his thumbs-up request several times as we went through 15,000, 20,000, 25,000, 30,000 and 35,000, and finally 40,000 feet.

During the "flight" my eyes darted constantly from the altimeter to the doctor to the flight physiologist. They did not take their eyes off me for a moment. Not until we hit 30,000 feet did I realize I was doing well. In fact, I had never felt better in a test chamber. After we had levelled off (actually at 41,000 feet), we remained there for about one minute. Then suddenly came the free fall, the abrupt change in pressure, decompression. It was not "explosive" decompression, but it was sufficiently critical. It was my crucial moment. I felt my ears "pop" and gas expanding throughout my body.

But for me, compared with the actual decompression I had gone through, it was "painless." I showed not the slightest sign of discomfort, much less pain.

When the test was over and the door opened, we all stepped out gingerly and the doctor and the flight physiologist, smiling, shook hands with me. It was all over. I could return to flying again.

I didn't wait long. The following day, as a pre-

caution, I arranged for a headquarters pilot to go up with me in a two-seater jet trainer. I zoomed around for more than an hour, doing a few rolls, shooting some landings, and I knew I was ready again for the F8U.

Next day I had my big moment. I went up in an F8U. I made an afterburner takeoff and as soon as I felt the powerful slam at my back, I knew I had returned to where I belonged.

Tiger One was back in the air.

Epilogue: What's Now?

SHORTLY BEFORE JULY 26, 1959, the day of my emergency ejection, I had received orders to report to Quantico to participate in a senior training course for amphibious operations. It was the type of assignment that precluded much flying, and one that I felt I could very well do without. But orders are orders, unhappy as such might be occasionally; and when I had expressed some displeasure at this assignment, my friend, Col. Jack Dalton, suggested that this was one time I'd be tied to the ground for awhile. After we had joked with each other about it, we made a friendly bet, a bottle of champagne, that somehow my orders would be changed. I would not be assigned to Quantico.

As I lay in my hospital bed at Beaufort, after the incident of July 26, Jack came to see me, and the first words out of his mouth were: "You sure go to an awful lot of trouble to win a bottle of champagne."

Actually, I did not know until after I had been discharged from the hospital that the unavoidable delay in reporting to Quantico had compelled headquarters to cancel my orders. A few months later I was, instead, ordered to attend the Armed Forces Staff College at Norfolk.

As I write this, I am about to graduate, and await orders for my next assignment.

I have often been asked, "What will you do now? You are getting older. Aren't your jet-flying days over?"

Ten years ago, I might have said yes.

But in this era of rapidly changing technology, a jet pilot at age forty is only a freshman for what is to come. Youth alone is no longer important. Experience in high-performance, high-altitude flying takes years of intense training, flying and discipline to acquire; yet this experience is indispensable for the next dimension in aviation—outer space.

What now?

Someday I would like to stand on the moon, look down through a quarter million miles of space, and say. "There certainly is a beautiful earth out tonight."


PYRAMID
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THE MAN WHO RODE THE THUNDER--Marine Lt. Col. William H. Rankin--was streaking down the sky over the Carolina coast at close to the speed of sound in a F8U Crusader jet fighter.

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The jet's engine thumped and rumbled --a warning light flashed on--Col. Rankin had to eject at 50,000 feet! Normally, his descent would have taken 10 minutes; this time it lasted 40, as Rankin was the airborne captive of a storm whose violence few men have ever seen, much less survived.

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