

DICK BYRD

Air Explorer



Fitzhugh Green

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By FITZHUGH GREEN

Peary, the Man Who Refused to Fail

Our Naval Heritage

Some Famous Sea Fights

Hold 'em Navy

Fought for Annapolis

Won for the Fleet

ZR Wins

Uncle Sam's Sailors

Midshipmen All

I'll Never Move Again

Dick Byrd—Air Explorer

Martin Johnson—Lion Hunter



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DICK BYRD READY FOR THE POLE.

The “face roll” is made of fox tails. It protects nose, cheeks and chin from the bitter wind.

Dick Byrd—Air Explorer

AN INTIMATE STORY OF A GREAT AIR EXPLORER,
WHOSE SPECTACULAR FLIGHTS TO THE NORTH
AND SOUTH POLES, ACROSS THE ATLANTIC
OCEAN AND OTHER ADVENTURES HAVE
THRILLED RED-BLOODED MEN AND
BOYS THE WORLD OVER

By

FITZHUGH GREEN

Author of "Won For the Fleet," "Anchor's Aweigh,"
"Mystery of the Erik," "ZR Wins," etc.

With 31 Illustrations

G. P. PUTNAM'S SONS
New York—London
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DICK BYRD—AIR EXPLORER

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by
Fitzhugh Green

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Made in the United States of America

TO THE BOYS
WHO READ THIS STORY

When Fitz Green asked me to say a word about this book, I told him boys probably had enough books already.

But he reminded me that boys were more interested in flying than in books, and that this story had a lot to do with flying.

I guess he's right. The boys of today are going to decide how successfully we shall fly tomorrow. In fact, I think the lads who make models and study airplane design in that way may do more to revolutionize the art of flying than even the aeronautical engineers.

So I send you all my best wishes and hope that you will follow some of our adventures while we are away on our South Pole flight.

A handwritten signature in cursive script, likely reading "Orville Wright". The signature is written in dark ink and is positioned in the lower right area of the page.

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DICK BYRD—AIR EXPLORER

CHAPTER I

FROM INDIANS TO AIRPLANES

THIS is the story of a boy who wanted to see the world. So he became a sailor by going through Annapolis. But that wasn't enough; he wanted to go where ships and trains couldn't take him. He wanted to see lands no other men had seen. So he learned to fly. He flew to the North Pole. He flew across the Atlantic Ocean. And next he is tackling the South Pole.

Many of his most exciting adventures are known to only a few people. Because I am one of those few, I am going to tell as much about this boy's narrow escape from death on the dirigible ZR-2 as about his North Pole flight; as much about his stormy career as quarterback on the Navy football team as about his wonderful exploits over the North Atlantic.

The first time I saw Commander Richard Evelyn Byrd, United States Navy—just plain “Dick” to all who know him—was in 1908 at the Naval Academy in Annapolis. He had just entered as a “plebe,” as the new fourth classmen are called.

One day after lunch I met a slender lad in the corridor of Bancroft Hall, the big granite building where we all lived. As was then the custom with the new midshipmen, I recognized the lad as a plebe because he walked stiffly near one wall, with his hands flat to the seams of his blue trousers, his eyes straight ahead and speaking to no one, not even to members of his own class who followed directly behind him.

Something attracted me to the fellow. It wasn't his looks, though they were comely enough, with his curly close-cropped black hair, his fine regular features and his sharp eyes. No, there was something else beside anything I could see; something that made me want to go up and speak to him, get to know him and count on him as a friend.

This invisible *something* was what we commonly call “personality.” It was made up of a thousand little things too small to notice: looks, cleanliness, bearing, expression, size, color, carriage and all the many items that in turn go to make up each one of these things. Byrd had an unusual

quantity of personality; he still has. He has that kind of personality we call *personal magnetism*. It is a fine charm that makes people want to know him.

I was just barely nineteen that day in Annapolis; and Byrd was eighteen. But he had magnetism then and I felt it, though neither of us knew it.

The trouble was, I was his senior in the code of the Academy. So I couldn't go up and say "Hello" in a friendly way. Oh, no, that would never have done.

What I did was this: I went over to him with a swagger that only a first class midshipman at Annapolis or a cadet at West Point can master and I said:

"Hey, who are you?"

I don't remember exactly how I said it, but according to custom I must have made my voice as low and as fierce as possible.

"Midshipman Byrd, suh."

"Where from?"

"Vuhginia, suh."

"Think you're good-looking, don't you?"

"No, suh."

"All right"—savagely—"Forward march!"

"Aye, aye, suh."

But there was something in the plebe's level gaze that rose above the harsh spirit of my upper class hazing; something in his erect figure and quick words that stuck.

I have sometimes wondered if that meeting between us two was perchance watched by the ghosts of our ancestors. If so, those same ghosts must be mildly amused to read this story.

For my story really starts far back before that meeting in 1908 in Annapolis. It begins near the same Chesapeake Bay on which Annapolis lies, but further down near the Ocean. It begins nearly three hundred years ago, when Colonel William Byrd and William Henry Fitzhugh were large landowners and moving powers in the splendid British colony known even then as Virginia.

Those were the days of redskins and clipper ships; of trappers and hunters; of powder horns and muzzle-loaders; of vast tobacco plantations; of good cheer at home and Indian wars across the James River. The Fitzhughs and the Byrds have mingled and spread since then, lost much semblance of their original strong family ties and in many cases scarcely know their own clan.

The first American Byrd was bluff old Colonel William who landed on the shores of the James River in 1671. It is related of him that as he strode up the crude dock he thought a certain red Indian was too insolent in his stare. Whereupon he planted himself fearlessly in front of the armed aborigine and gave him a piece of his mind in a tone that could be heard clear to the backwoods half a mile away.

Then there was Francis Otway Byrd, a fiery royalist. “Damn you, come on!” he bellowed in 1775 to a score of Yankee rebels against his English King. He had every intention of meeting them single-handed. Prudently they left the choleric gentleman to vent his spleen in the empty air.

Yet some Byrds fought in the Revolutionary War, in the War of 1812, on both sides of the Civil War, and in the Spanish-American War. In the late World War, Captain Tom Byrd, Dick’s younger brother, was officially decorated for his help in breaking the Hindenberg Line.

Facing death is no new ripple in the current of Byrd blood.

But because these ancestors of Dick Byrd’s were gentlemen, they were also often dandies. They knew rare wines and loved fair young women. They carried themselves with grace and they bore the touch of the thoroughbred about their grooming.

When we find that Dick Byrd naturally combines today the charm and grace of the cavalier with the daring and enterprise of the crusader, equally so it is that in the face of danger he does not seem to know the meaning of normal fear.

And so it is with a pleasant tinge of the old neighborly feeling that dates back some ten generations that I here set forth the astonishing yarn of this most famous Byrd of all a famous line of Byrds.

And I don’t say “astonishing” without good cause. Here are some of the citations I have just taken from his official record at the Navy Department in Washington, D. C.

Heroism in saving a man from drowning, July 16, 1914.

For saving a man from drowning, August 15, 1914.

Commendation from Admiral W. L. Grant, British Royal Navy, December 21, 1918.

Commendation by Director of Royal Canadian Air Service, August 27, 1918.

Commendation of the Secretary of the Navy for courage, energy and efficiency on First Transatlantic Flight, 1921.

Decoration by Government of Portugal for inventions of aerial navigational instruments, September 15, 1921.

Commendation from General Staff of the U. S. Army, June 10th, 1923.

Commendation from Secretary of the Air Ministry of Great Britain, connection with loss of dirigible ZR-2.

Commendation for courage in Arctic flying over Ellesmere Land and Greenland in August, 1925.

Congressional medal and thanks of Congress on the occasion of his having flown across the North Pole.

There are a lot more; enough to fill up a chapter or two of this book. I merely list a few to make it plain that I am not exaggerating when I say that Dick Byrd has had a career that would make the average boy's mouth water.

It hasn't been all luck either. Some men have adventures just because they happen to come along. But as you get further into this story you will see that Byrd's adventures are of his own making. He keeps going no matter what happens. And no matter how many disappointments or failures he has, he is always planning something bigger and harder than the last thing he tried.

Take the tragedy of his broken leg. At least it seemed a tragedy at the time.

In 1912 he graduated as an ensign U. S. Navy surely headed for a brilliant career. But his bad leg compelled the surgeons to retire him. It looked as if his career were blasted. How he beat the surgeons at their own game is one of the most gripping stories I have ever heard.

Then there was his months and months of preparation for the first transatlantic flight in 1921. He had done more to make the plan a success than any other single officer. At the last moment he was not allowed to go. Why? That part of the story is to come. But the important thing is that the disappointment did not embitter him, or prevent his going right ahead with another bigger and harder plan for crossing the ocean by air.

Then there was his heartbreaking crash in 1927 when he nearly lost his life and his co-pilot, Floyd Bennett, was so badly crushed that he was out of

flying for a year. But Byrd only smiled a little grimly and set about gathering up the broken pieces of his plane and putting them together again.

The nicest part of it all is that the greater he becomes the simpler he seems to grow. He doesn't high-hat anyone. He is quite willing to sit down and talk to people just like any other normal man. He likes to talk. He eats plain fare; dresses simply; exercises night and morning; enjoys a walk with one of his four small children; and is human enough to oversleep once in a while. All of which constitutes the truest sign of his greatness. Many men can do great feats. But only a great man is big enough to survive the plaudits of the world and still be the same natural person he was before Fame smiled on him.

CHAPTER II

A WILD NIGHT IN A STORM

“TOM, DICK and Harry!”

Recite those three names to any Virginian today and you will at once be asked if you are talking about the Byrd boys.

As a matter of fact, all three were named after relatives and the naming was in the reverse sequence. Harry is the oldest and is now the Governor of the State of Virginia. Dick, about whom I am writing this book, a Commander in the United States Navy, is the middle brother. Tom the youngest, was cited for bravery in the World War, where he served as a Captain with our Army in France.

It is interesting that the three brothers now have nine children between them, four sons and five daughters, all fine strong young citizens of the country, and well worthy to carry on the great name of Byrd.

Richard Evelyn Byrd, Senior, father of the boys, was a great thinker and lawyer. He held many public positions during his life. He was several times mentioned for governor of his state but refused to run.

Mrs. Byrd, the mother, was one of the belles of Virginia at the time of her marriage and is still of the true type of charming southern women for which that part of our country has become justly famous. It is doubtless from her that Dick inherits much of his winning personality.

Tom, Dick and Harry Byrd became well known in Winchester, Virginia, where they spent their boyhood. In their school days they stuck together through thick and thin. It is related that one June a newcomer came to town. He was a big red-haired bully, with an eye for trouble and a heavy fist to back that eye up.

On the bully's first morning in the community he met a towheaded barefooted boy hurrying towards the market. “Hey, there, sister, where you going in such a rush?” he yelled.

To his surprise the towhead, though measurably smaller, resented the insult of being called “sister.” He promptly yelled back without any respect for feelings: “Hi, brick, where’d you land from?”

“I’ll show you where I landed from!” retorted the bully, not knowing he was talking to Harry Byrd. He came threateningly towards the smaller boy. He did not notice two other onlookers who would be glad to see a first class fight.

“Take that!” he said, and swung savagely for the smaller boy’s face.

The next thing he knew the red-haired boy went down under the combined assault of three young Virginia wildcats, the Byrd brothers, in team formation. When they finished with him he knew who they were and why it was considered good form to leave them alone.

Yet the Byrd boys were the most popular in town, liked by old as well as by young. They were quick to befriend a homeless dog or take the part of the smaller boy in a row. They banded against orchard robbing, which for a time had become a public menace. And they left off fighting and hunting and camping long enough to give the other boys a run for their money in the public school they attended.

Perfect harmony did not always prevail among the Byrd tribe. Dick told me about one hot row he had with Tom who was the most peaceful member of the famous trio. One day Tom, aged eight, could not stand any longer the teasing he was getting from his two brothers. Arming himself with the family carving knife he went for Dick, chased him down the front hall, up the stairs and into the bathroom where Dick barricaded himself against the wild Indian on his trail.

“I don’t believe he would have hurt me,” says Dick. “But I wasn’t taking any chances. I climbed out the window and up the lightning rod, where I stayed until Tom cooled off.”

One of the older inhabitants of Winchester told me an interesting thing the other day just as I was beginning to write this story. He said:

“I can remember a small hill on the edge of town by which I used to drive sometimes on my way to a farm which I owned. From the top of this hill the local boys used to fly kites now and then.

“Bye and bye I began to notice that nearly always the same boy was in the group of kite-flyers; also that this boy had a tail kite one day and a box kite the next. Once he had a queer kite with no tail at all.

“When my horse threw a shoe one afternoon I got out for a few minutes. As it was a lovely sunshiny day in April I walked up the hill to watch the boys with the kites. I discovered then that the boy who was always there and had so many different kinds of kites was young Dick Byrd, the same lad who is now the great aviator.”

This is interesting because it shows how often what a boy is going to be when he grows up comes out in the things he does when he is still a boy.

I remember Dick Byrd telling me about “Doc” Kincade, the great airplane motor expert.

“One of the first things Doc did as a youngster,” he said, “was to take a watch apart and then put it together again. He really made it tick. After that he tried his hand at an alarm clock and turned the works into a motor boat that he ran in his bath tub.”

Flying kites wasn’t the only thing that Dick Byrd did in his boyhood to show what he was going to be when he grew up.

He was a great explorer at the tender age of ten years—great for his part of the world, at any rate. He had a small dog named Judy. He and Judy used to roam all over the Shenandoah Valley, up across the hills and through the most densely wooded section of the state.

One day he was out on a cross country trail when he fell in with an old darkey with whom he struck up a conversation. When Dick told the old man that he was exploring the man said:

“Has yuh seen de big cave?”

“No. Where?” asked young Dick.

“Oh, roun’ de mount’in; den down de valley and ’cross de broad fields what am close to de river.”

“Gee, is it a big cave?”

“Big? Man, it’s big as de ’hole town of Winchesteh!”

That was enough for Dick. He wasn’t quite sure where the old darkey meant the cave was; but he had a pretty good idea. So the next morning he set out early with Judy. He carried a parcel in which were two sandwiches and an apple for himself and a bone for his dog.

All morning through the broiling sun he plodded along over the mountain, down the valley and across the broad fields he knew skirted the little river. When he ate lunch under a big tree the sun was overhead. Then

he lay down for awhile and listened to the bees buzz around the clover and watched a big hawk sailing across the sky. He loved the outdoors then, and still does.

In the afternoon he came across two men who told him that the cave was two miles further on down the river. So he kept on. But he never got to the cave. It turned out afterward what the men had called a cave was only an old sink hole.

Finally, tired out, Dick turned to start home. Threatening black clouds were gathering in the west, obscuring the sunset. He was many miles from home when there came the first patter of raindrops on the leaves.

Soon the rain was coming down in torrents. Poor little Judy crouched at the feet of his young master and whined dismally. Dick took him into the woods nearby and sought shelter under a tree. But scarcely had he escaped some of the drenching rain than there came an awful crash and a blinding flash of lightning. A tree not fifty feet away had been struck by the bolt, and riven from root to topmost crotch. Boy and dog might have been burnt to a crisp had they been by it.

When the rain finally ceased it was night. The moon struggled through ragged clouds, giving the wet boy and dog a chance to find their lonely way across the dark fields and darker woods.

Hours later Dick reached home. His family were terribly worried. The river had risen suddenly and swept a bridge away. It was feared that the boy might be drowned.

A few days later the excitement of the missing boy had been forgotten by all the grown people. Some new prank, some new excitement had taken their minds. But in young Dick the memory of that dark night, of the howling wind through the trees, wild dagger-like flashes of lightning, the thrills and shudders of struggling home through the long black miles, had a profound effect. In him was born the love of battling with the elements. This love is what makes an explorer. Columbus had it; so did Hendrik Hudson; Peary, Scott, Amundsen and many others. Dick Byrd had it as a boy. He still has it. And now it is leading him to the ends of the earth.

CHAPTER III

AROUND THE WORLD AT THE AGE OF TWELVE

ONE nice hot summer afternoon in July, 1900, young Dick Byrd, then twelve years old, came upstairs to where his mother sat sewing.

Mrs. Byrd glanced up. With three boys, she was used to being called on at any hour of the day to repair a torn shirt, patch up a wounded knee, or judge the merits of some hot argument.

With practised eye she glanced over the boy. His clothes and hair were not disarranged. If anything, he seemed quieter than usual. There was no blood on the boy's face. With all signs of any excitement missing, she gathered that he was going to make the good old-fashioned request of: "Mother, may I have something to eat?"

Instead he stood there silently.

For a moment Mrs. Byrd wondered if he had a guilty look on his face. But it was more than that; it was the boyish sample of the same sort of look Dick Byrd gets now when he is thinking about one of his wonderful flights across the ocean, or to the North Pole.

Suddenly he held out his hand. In it he held a piece of white paper. He said: "Mother, read this."

For a moment Mrs. Byrd had a terrible feeling that something was going to happen. Mothers are like that. They know things about their children before being told.

The letter was from a friend of the Byrd family, Judge A. C. Carson, formerly of Virginia, but at the time presiding over a Judicial District in the Philippine Islands. He had invited Dick Byrd to visit him in Manila, to see the islands and learn something about the natives.

"May I go, Mother?" asked young Dick.

Mrs. Byrd did not know what to say. She knew that it was impossible for her or Dick's father to go along. Yet it seemed absolutely unthinkable for a twelve-year-old boy to go all the way across the continent out over the Pacific Ocean and visit someone in the South Sea Islands just as if he were going to Norfolk a few miles from Winchester to spend the week-end.

But there was a lot of Dick Byrd in Mrs. Byrd, and vice versa. I know both of them very well and think that both are born adventurers. She was afraid; yet she could understand why a boy would think with a great thrill of making such a trip. Finally she gave her consent. Two weeks later she put her boy on the train, bound alone for the other side of the globe.

"I don't think I shall ever feel as big or as important again in my life," Dick later told me, "as I did when I pulled out of Richmond on the train for San Francisco. I had a suitcase, all shiny and new. In it I had packed my best shirts, some spare underwear and a new brush and comb that I had gotten for Christmas. I had quietly slipped in two or three things that were special treasures, such as a big jack knife and a ball of string. I can't say that these articles were necessary on a trip around the world; yet I was surprised at the number of things I did with both the string and the jack knife before I was finished."

At San Francisco Dick took a steamer for Manila. On the way across he made friends with the sailors. Soon he learned to tie complicated knots and make some of the splices necessary on board ship. He made friends with the Chief Engineer and in calm weather went below to see the great engines that drove the ship.

Little by little he was for the first time picking up the love for the sea and for travel that in later years was so to mark his life.

The first stop was to be at Nagasaki, Japan. But about four days before the Captain sighted the coast of Japan the sky became darkly overcast. The surface of the sea began to assume that strange oily look which it does just before a terrible storm. The sun was visible through the clouds but looked more like a piece of polished brass than it did the sun. A heavy ground swell caused the ship to roll deeply and yaw from side to side. Any mariner with half an eye could have seen a tempest was at hand.

The passengers began to gather in little groups and talk with low voices about the oncoming typhoon. They knew from the Captain's report, the barometer and the strange threatening condition of seaward air, the danger into which the ship was heading.

The crew were busily lashing down everything loose about the decks. Life-boats were rigged so that they could be used in case anything happened to the ship. All loose gear about the ship and superstructure was made fast. Hatches were shut off from use by the passengers except one or two on what was to be the leeward side.

Suddenly, in the late afternoon, the hush that had lasted all day was broken by a sharp gust of wind. A rattling patter of rain fell across the deck, then stopped. Then, with full force, there swept down upon the defenseless ship one of those awful oriental storms that are known as typhoons. The waves rose higher and higher. Spray swept across the deck. Through the rigging the howl of the wind was like the wind through telegraph wires on a stormy day, only magnified a thousand times.

Dick was not allowed on deck. But he climbed up into one of the smoking rooms on the upper deck and through the wet windows watched the storm rage outside. The funny part of it was that though he was really frightened, he liked the storm more than any other part of the trip. At last he felt as if he were out at sea having an adventure.

By the mail that came back when the ship landed, Dick's father received from him the following letter:

DEAR FATHER:

I am not going to write a long letter because I know you do not like to read them. The day after I wrote mama a letter we had a big typhoon. I tell you it was a bad one. It delayed us two days and carried us 250 miles out of our way. The wind blew so hard the Captain thought it would blow the staterooms off the upper deck. He said it was the worst storm he had seen for fifty years. One lady got so frightened she came near dying. The ship rocked so much that we could not eat anything in plates, and \$100 worth of glass was broken.

Hundreds of ships were lost in that particular typhoon. Wreckage was strewn up and down the coast of Japan. But the ship carrying young Dick Byrd got in safely.

At Nagasaki he saw for the first time the things about which he had only read. It was as if his geography book had suddenly opened up and become real. The small brown people, the strange costumes, jinrikishas or little carts pulled by men, the queer houses and curious food, were all so new and wonderful to the boy that he spent the first two days simply wandering about, with his eyes wide and, probably, with his mouth open.

The trip down the China coast to Manila was uneventful. Judge Carson met the boy at the dock. One of the first things he did was to drive Dick around the city and show him some of the historic spots of that wonderful

old Spanish city. At that time the Spanish-American war had just ended. As a result many of the natives in the Philippine Islands did not even realize that they were now no longer under Spanish dominion but subjects of the United States of America.

Dick saw the place where the Spanish fleet were anchored when Dewey came steaming in to attack them. The Judge pointed out where the lines of torpedoes had been laid and across which Dewey heroically steamed, determined to sink the enemy. He saw where the Insurrectos, or native rebels, had organized their forces and defied the American troops. He heard from the Judge's lips the wonderful tales of heroism of the American soldiers who month in and month out, through drenching rains and scorching tropical heat, had pursued the rebel leader, Aguinaldo and finally captured him.

About a month after his arrival, on October 9, Dick wrote to his two brothers at home in Richmond, Tom and Harry Byrd as follows:

I got here all right after a very nice voyage. The insurrection is not over in the southern part of the Island by any means. It will be a good many weeks before it will be subdued. There was a big fight the other day and fifty Filipinos were killed and wounded. They are expecting to have another fight soon.

It so happened that there were a lot of Insurrectos in the same province where Dick was. This added much to the danger and excitement. At the time the boy was writing his letter nine American soldiers were killed and many others were wounded.

A few days later Judge Carson took his visitor out to a place called Palonge where some of the hottest fighting had gone on. A Captain in the American army acted as guide, Dick riding on a pony. The purpose of the little expedition was to capture the Mayor of a small native town who had stolen some money from the Government.

Luckily most of the fighting was over before Dick and his party got there. The Mayor was under arrest and in the hands of the soldiers. On the way back a Filipino spy was captured after a desperate struggle. This man was a noted enemy of the Americans and had done great harm to our cause. Therefore he had to be hanged.

A little while after this, Governor Monreal of Sorsogon Province, in the southern part of the Islands, gave the young American traveller a commission as Deputy Sheriff. This meant that he could be called to help in case of any trouble.

One reason that Judge Carson could take his visitor around and show him the real sights of the Island was that the Judge had originally gone to the Philippines as a Captain of volunteers. He had shown himself a hero on several occasions with the natives and was tremendously admired by both the Filipinos and the Americans. Everywhere he went he was very welcome.

After a happy and exciting visit in Manila, together with many trips around the Island, Dick set out to return. It would have been much simpler for him to have taken the steamer back to San Francisco and then down to Richmond. He knew the way and knew the people on the way. But that was not Dick Byrd's method of doing things. He told Judge Carson: "I think I should like to go home by a new route."

"How do you mean?" asked the Judge.

"Keep on around the world!"

This was exactly what happened. So from Manila Dick took a steamer down around India, through the Indian Ocean up through the Suez Canal to France, and thence to New York, and finally by train to Richmond. This meant that he had circumnavigated the globe; that is had gone completely around the world.

In New York he was met by twenty reporters from big newspapers and news services, who interviewed him and learned some of his adventures. How prophetic this was. Twenty-six years later, in 1926, the same Dick Byrd returned from his flight across the North Pole and was met by some of the same reporters, although now there were nearly two hundred of them and also at least two million additional citizens of the city of New York.

I think the next most important thing that happened to Dick Byrd was that he went to the Virginia Military Institute. In the last chapter I spoke of his great-great-grandfather and mine being neighbors three hundred years ago down in Virginia. In the same way it is interesting that my father went to the Virginia Military Institute and I nearly went there also. From what my father and Dick Byrd have told me, this wonderful old school has not changed much. During the Civil War it was the scene of a pathetic and terrible incident. Some of the boys were Northern, though most of them Southern. When war broke out these boys bade each other farewell and went away to do what they could to kill one another on the two sides of that great struggle.

At the Institute Dick Byrd received a stern military training which was to make his Annapolis course later seem very easy and natural. He learned to

get along with other men, and he found that military drill and routine were a great help to his physical condition. Though naturally an athlete, he had never done much in the way of football or other athletics until he fell in with the regular work of the military school.

One amusing incident comes to light in looking over Byrd's record of this period. As often happens in the case of a boarding school, the food at Virginia Military Institute at one time fell off in quality. Whereupon some of the older and stronger boys held a meeting and decided to make a definite move towards improvement of the fare.

The next day, November 2, 1905, they submitted to the authorities of the school an ultimatum to the effect that "If the food does not improve we shall all resign."

One has to appreciate the fine disciplinary spirit of a military school like Virginia Military Institute and also hot southern fidelity to realize what a bomb this statement was.

"Nothing less than mutiny!" exclaimed the white-haired Chief of the Governing Board.

The other members of the Board felt just as warmly and probably expressed their feelings in language that was, if anything, stronger.

For some weeks the whole state of Virginia, led by the newspapers, followed with the closest attention this volcanic eruption that was going on in the famous old school. Finally the young men were made to see the error of their ways; though not before the food was definitely improved. And the dignity of the Governing Board was preserved by the offending boys signing a statement to the effect that they realized they were breaking regulations when they submitted their first statement, and therefore apologized. But the young men carefully added: "We do not construe our signature to this paper as involving any change of opinion we may have expressed as to the character of the mess hall fare."

The fair-minded citizens who had followed the row in detail concluded that the fight was a draw. It had ended as it should: the boys got better food and the elderly gentlemen retained their self-respect.

From the Virginia Military Institute Dick Byrd went to the University of Virginia. As his father was a lawyer, he planned to pursue a course of studies that would bring him into contact with Mr. Byrd, Senior's business. Almost immediately his athletic prowess stood out. Although only a freshman, he made the Varsity Eleven. During most of the season he was substitute for the

famous quarterback, Honaker; and in several of the most important games he had a chance to run the team. Quarterback Byrd was “calm, efficient and full of leadership,” say the newspaper reports of the day.

Even at this time, he began to show very definitely those qualities of leadership which later were to make his name known throughout the civilized world. As quarterback it was his task to direct the team plays. One of the players afterwards told me:

“Dick Byrd never got excited. He had a good sharp way of snapping out his signals that made us feel the play he was ordering was just the right play to gain ground.”

CHAPTER IV

ANNAPOLIS DAYS

ONE day Byrd's father, who was a successful attorney in Richmond, Virginia, sent for his son.

"How would you like to go to Annapolis, Dick?" he asked.

The boy before him looked first stunned, then delighted. Annapolis suggested John Paul Jones, Farragut, Dewey and the Battle of Manila Bay, the wide blue sea and ships with high masts.

"That would be great!" he exclaimed.

"Do you think you can pass the examinations?"

"I—I guess so." Whereupon young Dick made a mental vow that he would pass them or bust in the attempt.

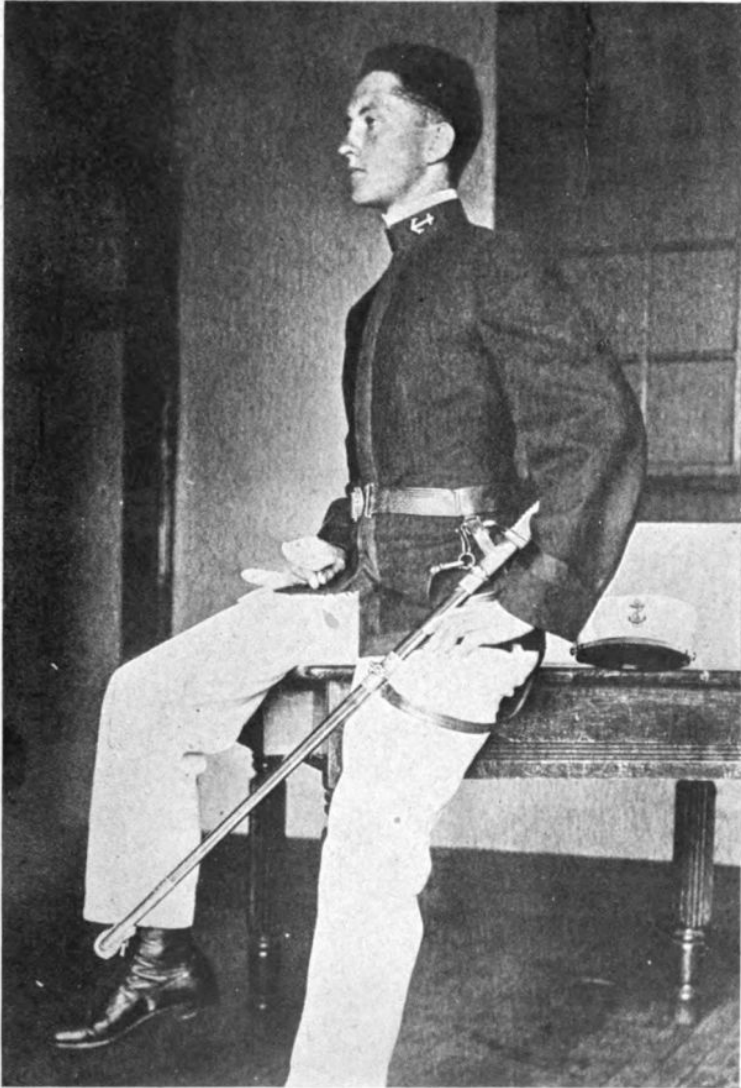
Three months later, in June, 1908, Richard Evelyn Byrd joined the Navy by entering the United States Naval Academy situated at Annapolis, Md. This famous school is the official institution of learning for American naval officers.

Our Navy came officially into being by an act of Congress in 1814 after a close struggle, the act winning by only two votes. By this act the President of the United States was authorized to appoint 48 midshipmen. All of the famous naval officers until the close of the Civil War entered the United States Naval Service in this way. The boys did not go to school, but received their training aboard ship. They led a rough hard life and did very little book work.

In 1833 there was established a shore branch of the Navy schooling system in Boston. As West Point was then in commission and doing well, it was at one time proposed that 100 midshipmen be sent there for their shore studies.

A vigorous protest against the poor conditions under which midshipmen lived was brought up on the U.S.S. *Constitution* in 1836 and signed by 55 of

her officers. This petition was forwarded to Congress by the Secretary of the Navy. It urged that a naval school be established suitable to our great country and its rapidly growing sea forces.



AN ANNAPOLIS MIDSHIPMAN.

Despite he was lightly built Byrd made the Varsity football and gym teams in his last two years.



DICK BYRD SLIDES DOWN A BACKSTAY.

A great stunt on the Annapolis training ship. First the middy “spikes” his hat on the lightning rod at the top of the mast.

Finally, after a long struggle, the Naval School at Annapolis was formally opened on October 10, 1845. Fifty midshipmen were present on

that occasion. From that time the school has grown larger and larger, until now it covers an area of several hundred acres and consists of a large group of magnificent white granite and white brick buildings, the grandest naval school in the world. As many as 2,200 midshipmen have been there under instruction at one time.

Byrd's father said to his son: "You can go to college if you want to, my boy. But I think the opportunity of an Annapolis education is not to be sniffed at."

"I wasn't sniffing, sir," said Dick promptly.

"You will not only learn how to be a naval officer," his father went on, "but you will have one of the best educations available in the country in engineering, electricity, steam and mechanical design, and in languages. In summer you will go to sea on a training ship and have a chance to see the world."

As young Byrd had already had a look around during his voyage at the age of twelve he knew how exciting this would be.

"Plebe year" was pretty difficult. "Plebe" is what midshipmen call the new boys when they first arrive at Annapolis. A plebe has no rights to speak of. In that day, nearly twenty years ago, hazing was at its height. However, law and authority have put down most of the disagreeable practices since then.

Young Dick Byrd was a good sport. I know because I was there. He learned to sit on the edge of his chair at mess and say nothing to his classmates ranged beside him. Meanwhile upperclassmen at the ends of the table made loud and caustic remarks about the appearance of the various plebes nearby.

"Hello, sweetheart!" to a pink-cheeked lad of 16.

"Look at the fireworks!" to a boy with red hair.

"What's your name, good-looking?" to Dick Byrd who, with his curly black hair and regular features, was one of the handsomest in his class.

"Jones, sir," blurted the boy next to Byrd.

There was a fine laugh all around as it had not been Jones at all that was meant. The point was that the plebes were required to look directly in front of them. Jones in his nervousness had thought the question directed at him. In punishment he was required after the meal to go to a firstclass men's room and "stand on his head."

“Standing on one’s head” in Naval Academy parlance meant you put your forehead on the floor, with one hand on either side as if you were going to actually stand on your head. Then you threw your feet into the air and let them come down again. Each time up and down you counted. Jones had to go on his head one hundred times for having implied that he was good-looking.

Another little trick that Byrd and his plebe classmates had to do was to sit in a wash-basin and row a race with other boys in other wash-basins. As each wash-basin was on the study floor of the firstclass men’s room there wasn’t any water. Tooth brushes were oars.

As a result of this system any vanity that might have lurked in the young midshipman was soon eliminated.

Byrd took to the naval routine as a duck takes to water. He had already had several years in the Virginia Military Institute. Also he had had a year in the University of Virginia, not to mention his trip around the world. He liked hard work and was a good student.

At Annapolis he found that he was expected to rise at 6 o’clock, take a quick cold shower, dress and be prepared to run to the outer terrace for breakfast formation and muster at 6.30 A.M. After a hearty breakfast he returned to his room and tidied it up; made the bed and swept the room; set his books in order and prepared his locker for inspection. Today his wife, who appreciates Dick’s Annapolis years, tells me that she believes every husband should have a little training in housekeeping in order to appreciate what a woman has to do.

From eight in the morning until four in the afternoon all midshipmen went through a steady grind of routine: first, recitation and then study hour; then another recitation and another study hour; and so on.

Byrd early had a leaning towards mathematics. “I hated the theory but I like the practical side of it,” he told me.

I gathered that he meant by this he disliked algebraic equations and a lot of the other obscure problems that came up in the very difficult mathematical course given at Annapolis. But the minute these equations began to be applied to the building of engines, the operating of motors and the navigating of a vessel on the high seas, mathematics took on an entirely new color.

It was significant that Byrd stood at almost the top of his class in navigation. Later on he was to be a pioneer navigator of the world. Today he

is still looked on as our greatest authority in air navigation. It was he who worked out the principles of flying and instruments used on the first Atlantic crossing by air in 1921.

He was not particularly strong in languages. One day the professor in French made him stay after class.

“Mr. Byrd, you seem to know the words but you can’t pronounce them.”

“Sorry, sir, but I do my best,” said Byrd.

“How do you think you are ever going to get along in France?”

Byrd thought for a minute, then said: “They will probably talk English to me, sir.”

This prophecy came true unexpectedly in 1927 when Byrd flew to France by airplane, and found almost as many Frenchmen talking his language as their own.

At the end of the academic year, in June, Byrd went on his first cruise. With the three other classes of midshipmen he helped become the crew of a battleship assigned for the trip that was to carry them all across the ocean and back again. This was a new kind of life for him. Instead of sitting around studying books he had to work night and morning at the hard labor assigned to regular seamen. He helped clean the guns, scrub and straighten up the decks and care for the ammunition. At one time he was assigned to the engine room. He helped shovel coal. In short, he did all the jobs that later on as an officer he was going to call on his men to do. In this way he was trained for leadership and command so that he would know exactly what his sailors would be up against when he ordered them to work.

Toward the end of that summer the practice squadron ran into a stiff gale in the North Atlantic. For three days the huge men-of-war tossed about like so many chips. One night of the storm Byrd was on duty from midnight to 4 A.M. as lookout. In going up to relieve his men he nearly was washed overboard. He caught with one hand on the life line and managed to save himself. Thus did a fraction of a second and a good eye for balance save for the United States a young man that afterwards was to be of enormous value.

In the following fall on his return to Annapolis Byrd went out for football. He was not heavy, weighing only 135 lbs. Also he was tall for his weight, nearly 6 feet in his stockings. But he was fast on his feet and an agile runner in a broken field. Almost at once the coach saw in him material for quarterback.

In his third season he made the Varsity and brilliantly played quarterback of the Navy football team just as he had on the University of Virginia team.

I remember one game in which he particularly distinguished himself. The score was tied and it looked as if the Navy could not win. The line on the other side was too heavy and too strong for the Navy's backs. Dick Byrd took the ball in the last few minutes to play, shot just outside of right tackle and sped dodging down the field. To the tune of a mighty cheering he crossed the goal line and the game was won.

Ten minutes later in the dressing room Byrd's team mates were joking with him to the effect that "you certainly are a hero now, old boy."

To which Byrd promptly replied: "Then there are eleven heroes on the team. I didn't make that touch-down by myself!"

This was a case which showed that even then Byrd had begun to give credit for his success to the men with him. Today one of his most outstanding traits is his modesty and generosity in connection with his own exploits. He is always more willing to lay the reason for his success at the door of one of his companions.

In his third year the Navy played Princeton, one of the strongest teams in the intercollegiate group. About halfway through the game a tough scrimmage piled both teams up on one side of the field. When the referee got the mass disentangled Byrd lay at the bottom. He had the ball but he could not rise. When one of his team-mates began to help him to his feet he asked to be let alone. "I think my leg's broken," he said calmly. It was. Much to his humiliation he was carried off and languished in the hospital for the ensuing three weeks.

One of the professional drills that he liked a lot was that held during the winter time twice a week in the Engineering Building. A group of midshipmen would be assigned to test an engine of some sort. Often this would be a gas engine such as used in motor boats, set up in the regular laboratory for instruction purposes.

The instructor would give a little lecture on how fuel was put in, how the engine was assembled, what its particular advantages were and what was the best way to operate it. Then one midshipman would be selected to take charge. He would assign other midshipmen to fueling, oiling, and so on. When all was ready the engine would be started and tests begun for fuel consumption, power developed, etc. Thus in detail and under proper direction Byrd learned to handle all kinds of engines, steam, gasoline and

Diesel. He learned how to take them apart and put them together. He learned the inner secrets of fuel consumption. In him was bred a deep respect for mechanical efficiency. Later in preparation of his plans for long flights this one part of his education probably did more to assure success than any other study or training he had received.

There was another course he took which was also very valuable and which was making a great impression on the young boy. This was his training in leadership. He was taught to stand up in front of other midshipmen, hold himself properly and give orders in a clear ringing voice. In short, he was taught to command.

Even more difficult than actual command in public was the matter of moral leadership in private. Byrd learned what to do when another man had got into trouble; how to listen fairly to both sides; how to face quietly and with self-control the anger and excitement of other men. All these things were to have an enormous bearing on the success of his expeditions later on.

In every way he was popular and successful. Then suddenly in mid-winter of his last year came disaster. Byrd was the leading member of the Navy gymnasium team. Meet after meet had been won. Every college and university that counted had been defeated—except one.

This one university, Yale, was due to face the Navy in the Annapolis gymnasium on a Saturday afternoon late in January. The whole regiment was highly excited over the prospect of a close contest and odds were nearly even. As there was a hop the same night many girls were down to see the middle's performance. Dick Byrd was counted upon to be the star that would bring the Navy its winning points.

The afternoon before the final test Byrd spent practicing what he thought was a stunt bound to win. This stunt was on the rings. He would swing out and turn over in a "dislocation" at the end of his swing. Then, while still poised high above the gymnasium floor, he would make another complete revolution, this time letting go his hands. He would swing his legs through under the rings and catch again. It was one of the most difficult and dangerous feats ever devised for this type of gym apparatus.

He did the trick once. To make sure he tried it again. At the time the gymnasium was half filled with other midshipmen and visitors who had dropped in to see the Navy team's final brushing up. When Byrd began his long swing for a last trial of his stunt, silence fell. To all the danger was clear.

Up and up he went. Finally his body was swinging to a level with the high balcony. The swish of his arms and legs through the air was audible. Even the gym instructor, a practiced hand at such work watched gravely as his star pupil went higher than any other man in the Navy had swung before.

When Byrd decided he was high enough he took one swing without a push. At the front end of the long swoop, just as he reached its top, he swung his body up and around. His shoulders “dislocated”—that is, appeared to go out of joint. Before he started down, in the next split second, his body was swinging again. This time his legs passed under the rings. He released his hold to let them go by. But gravity was at work. He had begun to fall. Frantically he grabbed at the rings. The fingers of one hand caught; the other hand was half an inch too low.

The crowd gasped as Byrd fell straight down. His life was saved by his falling feet first in his crash to the floor. He landed with a terrific thud. He tried to rise but fell back stunned. One ankle hung limp, its bones crushed by the fearful impact. Twenty minutes later he lay on the hospital operating table with two surgeons bending over him.

Now began one of the great though unwritten fights of Byrd’s life; his struggle to graduate. For weeks he was in the hospital. He studied as well as he could while lying in bed. But the stiff academic course at Annapolis is not made for a cripple.

Out of bed, pale and weak, he went away to convalesce. He took his books with him. Though his brain was tired by the long stay in the hospital, he kept at it.

Examination week came. Byrd entered it with the advice of friends in his ear: “Why not go back a class? You certainly deserve to take it easy after what you have been through.”

“But my classmates are my friends,” said Byrd doggedly.

He finally passed. At the hands of the Secretary of the Navy he received his diploma. But only a few people knew how close the Navy had been to losing one of its best men, or how close the class of 1912 at Annapolis came to graduate without its most famous member.

CHAPTER V

A MAN-O'-WAR'S MAN

AFTER graduation from Annapolis in 1912 Byrd went to sea on a man-of-war. He was now an ensign, or junior officer, in the Navy. Aboard ship he lived in what is known as the "Junior Officers' Country." This is the space set apart on a naval vessel for the young officers just out of Annapolis. Byrd had a small room which he shared with a classmate. He slept in one of two bunks fixed to the ship's bulkhead or wall, separating the stateroom from the adjoining one.

The messroom was a pleasant space in the center of the Junior Officers' Country. Three times a day about a dozen young officers gathered there to talk over their work during breakfast, luncheon, dinner. Here were planned the target practices, full speed trials and other interesting details of life aboard. It was a life more like that of a happy club than amid serious professional work in building up our sea defenses.

For the first time since entering the Navy Byrd did not have to live up to routine of study hour and taps. He could go to bed late if he chose, and get up late. But he had to meet the stiff routine of the day's work.

Ordinarily he rose at 7 o'clock. If the ship were at anchor in one of the clean ports of the world he would take a swim over the side. Otherwise he had a good cold fresh or salt water shower in the bath just outside his stateroom. He breakfasted at 7.30 A.M. In the tropics he wore his white duck uniform, cool and crisp; if north, and the weather were cold, he wore his blues with smart overcoat and dark cap.

Right after breakfast he went to his part of the ship; this meant that space on the man-of-war's upper decks assigned to his division. A division of men aboard ship corresponds to a company of men in the army. Each division has its guns or its firerooms or a part of the ship's engines.

Byrd's visit to the quarters of his division was to see that everything was cleaned up. His men had been at work for two hours scrubbing down the

decks, polishing the brass works and getting ready for inspection at 9.15 A.M.

At 9 o'clock "Quarters" was sounded on bugles. All hands then fell in at their stations on deck. Senior division officers inspected their men. If it were Saturday the Captain also went around and made an inspection of his full crew who were on that day in dress uniform.

Right after quarters drill call was sounded. Byrd's division was attached to a turret in which were contained two 12-inch guns. For an hour he took charge of the crew of one of these guns directing the loading and dummy firing of the great rifles. It was his task to see that powder bags were handled carefully and that the huge projectiles were rushed up from below into the gun chambers without accident.

Here again Byrd's qualities of leadership were brought to test. In the hot noisy turrets he must make his men work swiftly and accurately. A slip meant death.

One morning a big shell was being hoisted up from below. It weighed half a ton and was of solid steel. It was being carried up on a big car of brass and steel. Just as the car reached the top of the hoist opposite the gun breach the cable carrying it broke.

Byrd was standing by the man supposed to dump the shell from the car into a tray from which it was to be pushed into the gun. This man had an arm and a leg in such a position that he would have been struck by the massive car when it fell. There was no time to shout. Almost instantaneously Byrd reached out, seized the man's arm and flung him clear of danger. By this quick action he saved the sailor's life.

In the afternoon were held boat drills, fire and collision exercises and other forms of training that make our American bluejackets and men-of-war the most efficient in the world. Byrd's divisional officer once told me: "I am pretty lucky. I have a young officer who takes all my work off my hands. Seems to like to handle the division himself."

He referred to Byrd.

About three months after Byrd's graduation his ship held target practice. She steamed down a prearranged course and fired at a target several miles away towed by a Navy tug. Byrd has told me of this wonderful experience:

"I was stationed in the fore-top. My job was assistant spotter. I had to watch the fall of shot near the target and decide whether we should aim higher or lower.

“I never shall forget when the first salvo was fired. I could feel the whole ship swing over with the terrific concussion of the guns. Great masses of yellow flame and brown smoke covered the entire side of the ship.

“To my astonishment I could see the projectiles flying through the air. They looked like little black beads. This surprised me because only half an hour before I had seen these same projectiles, weighing 870 pounds apiece, being rustled around between decks by our men who couldn’t begin to lift them. For the first time in my life I understood the prodigious power of smokeless powder.

“When the projectiles reached the target a dozen lofty geysers sprang up, rising from 300 to 400 feet in the air. Over one end of the target spread a mass of wreckage; one projectile had landed squarely on the deck, torn two of the target masts away and wrecked the canvas screen.

“At that moment I began to get a clear idea of the terrible destructiveness of war.”

“Did you imagine what it might be to be shooting at a real enemy?” I asked him.

“I did. I pictured a thousand men out there in another ship, and our shells flying towards them. I thought of the air being filled with projectiles coming our way, too. What a horrible thought it was! Yet I knew if war should come I would want to get into it.”

Byrd lived up to all of this. When war came he did his best, though a cripple, to get into it. But eight years later when he made his transatlantic flight he told all the newspapers, and through them millions of readers, how much he hoped transatlantic flying would bring the nations of the world together.

He was even more impressed when a few days later he was sent out in a repair party. Before sunrise he left his ship in a small motor launch with two score bluejackets. They boarded the towing tug and steamed down the target range. About 10 in the morning, when the sun was glistening in the sky and the air cleared for shooting, the firing ship came steaming at high speed up the range. At the proper point she opened fire. For a moment she disappeared in flame and smoke.

A few seconds later Byrd and his repair party heard a noise like a dozen trains coming through a tunnel. These were the shells flying through the air towards the raft. Only a few hundred yards astern of the tug rose the same group of white geysers that Byrd had seen from his ship, the towering

splashes caused by falling shell. When the firing had finished the repair party went aboard the raft, put up new masts and lashed together the target screen that had been lacerated by the hail of steel.

After some months of this fascinating gunnery detail Byrd was shifted to the engine room. Here he learned first hand all of the wonderful details of the battleship's motive power. He studied the use of her precious fuel; how much it took to send her along at various speeds; how many thousands of miles she could steam on one load of fuel and at what steam pressure her greatest efficiency could be got.

A few weeks after he had gone into the engine room the battleship's full power trials were held. Over a measured course of a mile she ran up and down for a whole day. Later she steamed for 24 hours at full speed. In this way, it was possible for the young officer to compute the efficiency of her boilers, engines and propellers.

Just after Christmas Byrd's ship joined the battleship fleet and went to Guantanamo. This was the naval base on the south shore of Cuba. While ice and snow were making the people up north uncomfortable, Byrd and his sailor friends were basking in tropical sunshine. The object of this southern cruise was to continue fleet training and work under conditions that were much more comfortable for the men. It is still taken each winter by our battle fleet.

One day several of the junior officers decided to go hunting. They went to the commanding officer of Byrd's ship and asked permission to use one of the power boats to cruise out around the point of land that bounded the western side of Guantanamo Bay and go ashore further down the coast. They hoped to shoot wild boar that were reported to abound thereabouts.

Byrd went along. The boat landed all right. The young officers shouldered their food, pup tents and rifles and set off into the hills.

That night a heavy tropical rain came. The small tents were not good enough to keep out the deluge that one so often gets in the tropics. Shivering and miserable the campers were up before daylight next morning and under way. But the trail had been washed out. By noon they realized they were lost. All that day they floundered around trying to get back to their boat.

It was a serious situation. First of all, to lose a good Navy boat was a cause for severe discipline. Secondly, to overstay leave kindly granted by the Captain was one of the most serious offenses in military life.

Finally, so one of the party later told me, Dick Byrd said: “Suppose we divide. One of you fellows and I will go over and report the trouble to the Captain. We can walk overland to Guantanamo and get a boat to take us out to the ship. The others of you can divide in two parties and cover at least ten miles of the beach before we can bring a relief boat around to you.”

This plan worked out beautifully. Byrd got back to the ship and the Captain was sensible enough to understand how the boat could have gotten adrift. At once he sent out another boat to pick up the party of young officers and also to look for the missing craft. On its way this boat found the first boat drifting around empty. The party got back safe and sound. The incident is only one more sample of Byrd’s ability to grasp a situation and promptly do something direct to meet the emergency.

Another good example of his quick thinking came not long afterwards. The captain sent for him one afternoon and said: “Mr. Byrd, I want you to go ashore with me and call on the Commandant of the naval station.”

“Aye, aye, sir,” said Byrd. He then hurried to his room to put on his very best uniform. A choppy sea was running when the launch shoved off. At the Captain’s suggestion Byrd sat for a few moments in the fore end of the cockpit watching the coxswain get his course. As he was making an official call he was dressed in his very best uniform and altogether slicked up for meeting the high ranking shore officer.

A few minutes later another launch passed in the opposite direction. One of the crew of Byrd’s launch was leaning over faking down the stern line. He didn’t see the bow wave of the other launch coming across the sea that was already running. As a result, he was not braced to meet the sudden movement of the boat. He tumbled overboard.

Byrd heard a shout. Glancing around he saw the man disappearing beneath the waves. He did not stop to ask the Captain whether he could go over for him. In the twinkling of an eye he realized that the man was not a good swimmer, that the launch was going very rapidly, and that he would probably drown in the heavy seas before she could come back.

Without even taking off his coat Byrd plunged over the side. He swam to the man, kept him up, and held him up until the launch came back. For this quick thinking and brave act Byrd was awarded a special Navy medal.

During that same winter a prophetic incident in Byrd’s life occurred. He was ashore one afternoon walking for exercise when he met an aviation officer attached to the Navy airplane unit. In those days planes were not

reliable as they are now, and they did not have the comfortable seats and big heavy bodies.

“How would you like to take a hop with me?” the young officer asked Byrd.

Byrd did not hesitate. “Nothing I’d like better!” he exclaimed.

“All right, meet me at two o’clock over by the hangar.”

Byrd often talks about that first flight. “I was right out in the open,” he says. “The plane had no fuselage. We sat on little seats and looked straight down, with nothing between us and the water. It was a great thrill.”

Byrd never really got over the thrill of that first flight. He was not happy until he could become a flier himself. Already he had talked secretly with some of his friends about the possibility of a plane flying to the North Pole. Peary had gotten to the Pole three years before, but had seen almost none of the great ice-covered Polar Sea, except along the narrow trail he followed. Byrd wanted to view vast areas that could be seen easily only from the air. It was a wild plan, but ultimately it worked.

CHAPTER VI

A BITTER BLOW

DICK BYRD is the kind of man who is always just a little bit ahead of the times. During his duty in the fleet in 1914 he was thinking about North Pole and transatlantic flights before people believed the aeroplane was anything more than just a stunt.

But he was still having trouble with his injured foot. It hurt him a good deal at times; and he felt a great deal of anxiety that it might end by being the cause of his retirement from active duty.

Despite this handicap he was active enough. Let an eye witness tell of an instance:

“We were out off the Capes testing some pontoons in a seaway to find out whether they would keep a plane up. It was a raw, dark morning and one of those spring nor’easters came boiling down the coast and put an end to our tests. Just as we were hoisting our gear aboard a man fell over the side.

“I remember Dick Byrd was standing right by the rail when it happened. He spun around, and let out a yell of warning to the man at the winch to hold everything. There were other yells; but Dick’s was first, for his reactions seem to be abnormally quick.

“‘Away starboard lifeboat!’ sang out the officer-of-the-deck.

“‘Not a chance,’ I heard the boatswain snap at my elbow.

“He was about right. The man was too close to our counter for us to dare use the screws; and we were lying stern up into the swelling gale, so that there wasn’t lee enough to drop one of the whaleboats without swamping her.

“‘A heaving line!’ yelled the quartermaster.

“Someone grabbed a coil from the after deckhouse and ran to the rail. Two life belts were dropped. The patent life ring was smoking away

alongside. But none of them were by the man who was struggling in the icy water.

“Just then I noticed Byrd. He had taken off his uniform jacket and kicked out of his shoes. Before I could stop him he was over the lifeline and poised for a dive.

“You have to know Dick Byrd to appreciate him in action. He is the mildest-mannered and -looking and -speaking person in everyday life you ever saw. He is nearly always smiling, and his voice is so low that he seems to be confiding in you when he speaks. But when he’s about to act, he’s absolutely another man.

“I caught a picture of him as he balanced there on the waterway’s edge that will stick in my mind the rest of my life. He seemed taller and thinner with his coat off. His wiry body was curved a bit forward; his sharp chin was a little in; his lean legs were stiff and straight. His whole expression, eyes, mouth, jaws, and sucked-in cheeks, seemed concentrated on the drowning man out there in the heavy seas.

“Before anyone could say a word he was off—off into the air like an arrow, just as the old crock we were on hove up and over the poor devil in the ocean. A clean dive he made, and came up not two feet from his man, as at that very moment a big white comber rolled over the both of them, while the rest of us held our breaths.

“‘He’s got him!’ screamed an excited sailor as two heads appeared together out of the froth.

“He had. We sailed out another life ring at the end of a line. Neatly, Dick took a turn around himself and the other fellow, and we hauled them aboard.

“Sounds simple, I know,” concluded the eyewitness, “but you have to feel the icy cut of a spring nor’easter off the Capes and the crazy lurch of a small vessel lying in its trough to know what it means to go over the side after a drowning man half again as heavy as your self.”

That little incident brought just one of Dick Byrd’s citations for heroism.

After his flight to Guantanamo in 1914 he could hardly wait until he had a chance to fly. He asked to be put on aviation duty.

Then, just on the eve of action, came the tragedy—at least it seemed so at the time. The Fleet Medical Examining Board was gathered on the flagship. The official papers of Lieutenant Richard Byrd, U.S.N., lay on the table before them.

“Seems a shame when he has such a good record,” said one.

“But he can’t stand watch any longer. Don’t you see he is useless on a ship?” said another.

Upon which the third, a plump, jovial medical officer who has long since gone to Europe to live on his retired pay, sagely wagged his head and said: “There is no hope for this youngster. Byrd’s crippled foot compels him to give up active duty.”

All as a result of the seemingly insignificant injury in the gymnasium.

His foot had not fully healed yet. When he stood watch on the bridge of a battleship his ankle nearly always ached. In cold, raw weather he suffered a great deal. The bones had been nailed together but there was always a chance that some slight blow might break them apart again.

Finally the medical board decided that young Byrd had to be taken off the active list of the navy. It was wrong, they said, to keep a man on who was not fit in every way to do the full duties of an officer.

Byrd’s discouragement when he had to retire is hard to describe. For many years he had been looking forward to the time when he would be ready to go out as an officer on the high seas. He loved ships and the sailors on them. He loved the bustle of work and strict routine of battleship life. He liked the firing of great guns and his ability as a bridge officer in manoeuvres was known throughout the fleet.

Now he faced the necessity of leaving it all. His career was blasted. He would have to go home a failure. True he would have a small income as a retired officer. But a little trickle of money each month meant nothing. In fact Byrd has never worked for money—always for the bigger and finer achievements which money could not buy.

It was a terrible blow to the boy. “I thought for a long time it was the end of everything,” he now admits. “I wanted to be a naval officer. I had a lot of plans in my head all ready for the time when I should get a little more rank.”

“Such as flying the Atlantic?” I asked.

“Honestly, that was one of them. Why, I have a letter I wrote years ago to Walter Camp asking him to help me get backing for such a flight.”

“But what was the sense of it?”

Dick Byrd suddenly grinned that fascinating smile of his. “What’s the sense of any of that sort of thing? If you stop to reason it out you see it adds

to human knowledge and spreads control of the earth by mankind.”

So he was retired and listed as a navy cripple. For a while he settled into a slough of despondency. Whatever he did, wherever he went, the stigma of physical incapacity was laid upon him. Official records blazoned the fact on every naval station.

“I might just as well have worn a wooden leg,” laughed Dick, after a perfect war record gave him courage to recall his misery.

Then Germany through her ill-chosen remarks drew America into the war. In the early spring of 1916 war was declared. Every man who had any sort of military education was extremely valuable. So despite his game leg, Byrd was put on duty organizing a militia unit in Rhode Island. Next he was transferred to Washington to help the Navy Department put together a big Naval Training Camp.

As we are not a seafaring nation it was hard to get men who knew enough about the ships and sea to man our battle fleet. Byrd chafed under the inaction. He was used to an outdoor, energetic life. Now he had to sit at a desk, write letters and answer the telephone.

Another officer, condemned at the same time to Navy Department routine, told me about Dick Byrd:

“I have never seen a man as miserable as Dick was. He grew thinner and paler every day. We used to think that he wasn’t taking care of himself. The trouble was that he was scheming night and day about how he could get away from the office routine and into active duty.”

Soon after this he came before the medical examining board.

“No use,” they told him, “you’re not fit for active duty. And if you don’t take care of yourself you won’t even be fit for office duty.”

The cold fire that comes sometimes into Dick Byrd’s eyes now lit them up.



A YOUNG GUNNERY OFFICER.

Before he retired Byrd made an enviable record in command of turret and broadside guns in the U. S. fleet of battleships.



A NARROW ESCAPE.

Dick Byrd's early flying days in 1917-8 were full of close shaves when he flew in the early planes which were often unsafe.

"Give me a chance," he begged them. "The trouble with me is not my health. That is secondary. I want to learn to fly. I will make a bargain with you."

The high ranking naval surgeon blinked. He had never been talked to before like this.

"If you will let me have a month of aviation training," Byrd went on, "I'll show you how much difference it will make with me. If I can't pass my physical examination after a month of flying, I'll promise to get out without another word."

After some discussion the doctors decided to give the eager young man a chance. They passed him conditionally. A few days later Byrd landed at the Naval Training Station at Pensacola to learn to become a flyer.

Some people can't understand the desire of a man like Byrd to get into aviation. The many accidents in flying make it almost seem that sooner or later every flyer will break his neck.

But Byrd, like most flyers, understands the proper way in which we should think about flying. He realizes that all active modern life is

dangerous. A man may fall out of a window and break his neck; or be run over in the street; or catch some fatal disease; or die in any one of a hundred other ways.

Flying, like automobiling, has its dangers. The danger of flying is still greater than that of any other form of transportation. But this danger is being reduced every day. Engines are becoming more reliable; planes are being built stronger; pilots know more about how to run them; and man's knowledge of air conditions is increasing every day.

When Byrd went south to learn to fly, he knew that during his training period he was going to take big chances. He knew that he would have to learn to handle a plane in the air and know what to do if the plane started to fall. But he was willing to take that chance.

Today the airplane student does not have to undergo anything like the risks a pilot faced when Byrd began to fly. Instructors now have a system which assures that a young pilot is competent to fly alone before he has to take the plane up by himself. Further, there is no longer the great chance of an engine stalling, which was the great cause of accidents a few years ago.

Byrd realized, and still does, that the most dangerous thing in the progress of aeronautics is the pioneering work. The man who goes out over a new territory or tries a new kind of plane or fuel, is the man who is facing real peril. He may be compared with the chemist who is developing some new strange compound. When smokeless powder was invented its pioneers suffered terrible burns. Many even died. But now smokeless powder is safe to handle and extremely valuable.

In the same way, the regular established type of plane and engine is today a very safe vehicle for flying. So it is not fair to condemn aviation because pioneers die in their attempts to develop some new branch of this science. Byrd realized all this and felt that he should not try pioneering work, such as exploration, before he was familiar with planes and how to handle them.

CHAPTER VII

THE MAKING OF AN AIR PILOT

I often get Dick Byrd to tell me about how he learned to fly. So many young men are thinking of an aviation career these days that I am sure this is a subject of interest.

When he came on the small training station at Pensacola, Florida, in the spring of 1918, he was filled with anticipation. At last his dream of becoming a flier was to be realized. He was to learn to fly in a navy plane with a regular instructor. Big sheds of canvas had been erected to protect the planes. In the rush and hurry of war time there was no chance to build regular hangars. A concrete runway extended from these sheds down into the water. Seaplanes were used mostly for the training of our Navy men. Land-planes, somewhat easier to fly, were not brought into naval use until later.

Byrd had not been on the station ten minutes before he witnessed a terrible tragedy. Someone shouted just as he was walking across to the officers' quarters to leave his suitcase and report to the Commandant. He glanced behind him. He thought it might be an automobile about to run over him. But there was no car in sight.

Another shout. This time he looked up. There in the blue sky a big plane was headed downward. Slowly it spun around as it gathered speed towards the bay. Byrd stood rooted to the spot. It was a gruesome sight to know that in the falling plane were two young naval officers, alive and well like himself. Yet there was nothing to do. In the time left before the plane would crash no possible way was open for a man to help. In a few seconds the two young officers would be dead.

With a terrific concussion the plane struck the surface of the bay. Spray rose high in the air. Bits of wing fragment scattered in every direction.

Both men were killed. While Byrd watched from the shore he saw their bodies hauled out. A weaker man would have given up flying then and there. But it took more than a crash to upset Dick Byrd.

That very afternoon he flew. Of course he could not pilot a machine yet; but he went up with a friend of his who at one time handed him the controls.

“I never felt less like flying in my life,” he confessed to me in describing that day.

While we are on the subject the reader would no doubt like to know what opportunities there are for a young man to get into flying today. When Byrd was at Pensacola the war was on. The Navy and Army both were anxious to get young men into training as fliers. In those days it was relatively easy for the regular officer or man to secure flying duty.

But there are still many opportunities and a fine future today for young aviators. Commercial aviation is now the big opening. And with the success of our air mail there are more openings every day.

Of course, if a man wants to fly a military plane and possibly be of use in war, he must join the Army, Navy, or Marine Corps. Also he can fly in the National Guard or the Army or Navy Reserves. These reserves are usually recruited from former officers of the Army, Navy, or Marine Corps. As a rule only officers fly in any of the services. So it is necessary to work up from low rank and gain an officer's commission.

A man who is not a college graduate is usually forced to enlist. This means it will require some years for him to work up. In the meantime he would take care of the planes on the ground or float, repairing, rigging, overhauling engines to keep them in perfect condition, and so on.

This brings up a matter of interest to all would-be-flyers: It takes a great many more men on the ground to each plane to keep it in condition than it does to fly it. For instance, in the French army there are an average of twenty ground men to every pilot.

The other day I asked Byrd if he thought there were plenty of pilots for all the planes now in commercial service. It seemed to me there ought to be because so many are being taught to fly these days.

He replied: “No, I don't think so. It is true there are lots of men who learned to fly during the war. But the youngest of these would now be at least thirty. Their places must be taken by younger pilots.

“Another thing the young pilot must remember is that the best of our flyers tend to drop out of actual flying into other branches of commercial aviation. Men who are now operating air services, designing and building planes, building up business for air transportation, and so forth, are usually

men who used to be pilots. It will be a long time I think before there will be enough good pilots to supply the demand.”

Of course in the early days of his training Byrd went up with another pilot. That was ten years ago and engines were not so reliable then. At any time he might have come down in a forced landing. As a matter of fact, every training flight that he had with an instructor was successful. All his forced landings—and he has had nearly fifty of them—came later while he was flying alone.

Finally the great day arrived when Byrd was to make his first flight alone. He had had seven hours in the air with an instructor. He knew how it felt to fly a plane and had the rules down pat. The question was whether he could obey these rules in an emergency.

“My first flight was probably the greatest event in my life,” he told me. “Never again does a flyer feel the same thrill as when he first throws back the controls and lifts his machine clear of the earth.”

He went on to describe to me the sensation of floating high in the air, apparently unmoving. He could see that the earth seemed to swim along slowly far beneath him, but there was no sense of motion on his part. He touched the controls and the plane changed course to the right. As he increased the turn she banked, tilting almost to a vertical position. Then he tried shutting off his engine and skimming downward. Gradually there came to him that gorgeous feeling which only the flyer knows of at last conquering the air. And truly this feeling is justified; for 6,000 years man has dreamed of imitating the bird. And at last this dream has come true.

When Byrd came down to the water the first time alone he did not land. He merely touched the surface and then hopped into the air again. He realized that the most critical part of flight is the landing. So he kept at this part of his training again and again until finally he could gauge the water exactly right, and bring his plane down upon it without the slightest jar and scarcely a splash.

Nowadays a young pilot's instruction is a great deal more complicated than it was then. I know that Byrd is particularly interested in flying schools because one of his old Navy companions at Pensacola is now running one. This is Walter Hinton, whose school in Washington is so successful.

I asked Byrd if he thought it better for a young man to learn flying by going into an airplane factory first, or by going to an aviation school.

He replied: “Both ways are feasible. The more a pilot knows about the way planes are built the better. I would say that if you have to earn your living as you go along, the better way to begin would be to get a job in an aircraft factory and watch your opportunity to win a chance to fly occasionally. You will get into the air more quickly, of course, by going to an aviation school.

“I believe there are nearly one hundred organized schools these days. Also there are a number of individual pilots owning their own planes who would give instructions.

“It is not necessary for a young man to have any special education in order to learn to fly. It is a matter of general intelligence. Of course the more you have of both the better you are able to understand the principles of aeronautics. But I believe that most young men who go into flying have the equivalent of a high school education.”

This is an interesting point of view because Byrd had had the special courses at Annapolis in addition to his training at the University of Virginia. I think he did not find either necessary in any way to learning to fly; but both helped when he began to develop his instruments for aerial navigation.

During the weeks following Byrd's first training with an instructor he made hundreds of landings.

“I made them from every altitude and in almost every position the plane could assume, with and without power,” he told me.

This was like Dick Byrd. In a sense he has a “one track mind.” When he starts to do a thing he concentrates on the task and doesn't let anything distract him.

He went on and tried stopping the engine suddenly a few feet above the water, again in the middle of a bank, and sometimes in midair well up. He knew an engine failure was far more dangerous at 50 feet than 1500 feet. He wanted to be prepared. I think he knows as much about forced landings as any flyer in the world today.

Little by little Byrd learned the basic things that every flyer has to learn. He found out that most of the trouble came from a pilot allowing his plane to lose its flying speed. He learned that, once this happens, the only thing the pilot can do is to nose down and gain speed by falling. If he is too close to the ground, he will crash. Byrd learned also that he must not climb too rapidly. He had to gauge his plane and its power and size so that he knew

what the climbing angle was. He learned how much to bank on turning so that his plane would not skid.

One of the most important things that happened to him was being made a member of what was called the “Crash Board.” This was the committee that investigated every accident at the station and tried to decide what had happened to cause the crash.

In this way Byrd was able to study the history of each flyer prior to the crash, the wreckage of the crash, and all evidence that other people could give leading up to the tragedy. He began to see how easy it was to avoid accidents if the plane were properly inspected before going aloft and if handled exactly in accordance with instructions once in the air.

I asked Byrd what his opinion was in regard to the relative safety of an airplane and an automobile.

“The airplane is naturally more dangerous,” he admitted. “Even now I believe there are no accurate statistics on the subject. But last year air mail flyers flew more than four million miles with only one fatal accident.

“Of course there have been lots of deaths due to incompetent pilots, old or weak planes, sudden storms and taking unnecessary chances. It depends a lot on the plane and the pilot and the conditions under which they fly. Most of the causes for accidents are really under the control of the man who is risking his life.”

This brought up the other point, which is related; that of whether a married man should fly. The same point applies also to the boy or man who is contributing to the support of his parents.

“Well, for the man who believes in safety first as the most important rule of life,” declared Byrd, “there is something in this. However, my feeling is that that kind of man will never amount to anything as a flyer—or anything else, for that matter. Flying is getting safer every day. And the intelligent pilot doesn’t take anything like the chances that we used to take at Pensacola ten years ago.”

At this point we fell to discussing the matter of getting a pilot’s license after having received a diploma from a flying school.

He reminded me that a license for an industrial pilot can be had only after fifty hours of solo flying. Some companies require as high as five hundred hours in the air. This does not mean necessarily that the pilot is alone in the plane, but that he is in charge and operating the controls.

An industrial pilot's license entitles one to carry merchandise or mail. A limited commercial pilot's license permits passengers for hire within a limited area, generally ten miles from a fixed base. This is the license you can get after fifty hours of solo flying. A transport pilot is the only one allowed to carry passengers. He must have at least one hundred hours of solo flying.

After graduation from a school which gives only ten hours of flying, it is quite a problem to get the additional hours necessary for employment as a pilot.

Byrd pointed out that there are several ways to do this. One is to hire a plane by the hour, being careful not to fly it across a state line. The cost for such a plane will be as high as twenty-five dollars an hour. Another way is to join one of the flying clubs that are being organized all over the country. In such a club several persons who want to learn to fly buy a plane together, hire an instructor, and use the plane in turn. This plan cuts the cost per person to three or four dollars an hour.

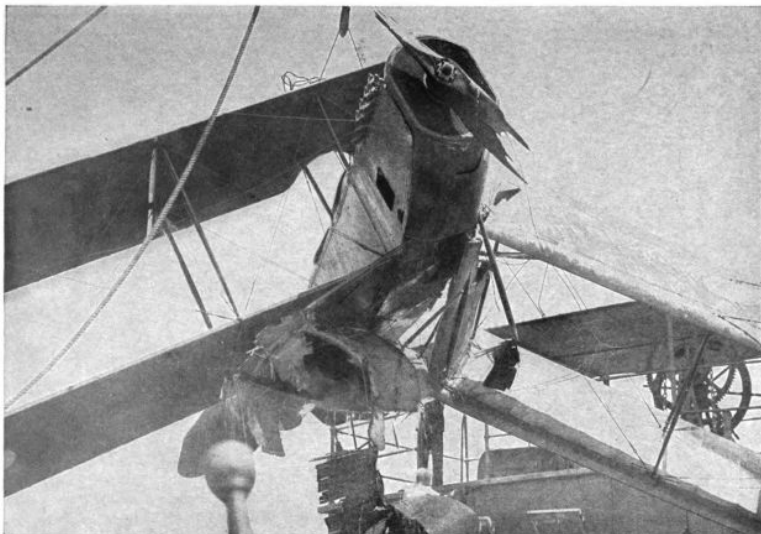
"Don't forget," Byrd added, "if you can qualify for the Air Reserve the government will arrange to give you flying time in government planes."

Of course if a lad is lucky enough to get a job around a flying field where he can exchange his services or part of them for the occasional use of a plane that is a good way to get in some flying. Or if he is lucky enough to have the price and place to keep it he can buy a plane.

The trouble is a plane costs at least two thousand dollars these days. However, it is still possible now and then to pick up a rebuilt war-time plane with a serviceable engine for much less than that. "But you must be sure to buy a plane that will pass Government inspections," Byrd emphasized, "and be licensed before paying anything on it."

"Would you advise a young man to try building a plane himself?" I asked him.

"I think this would be an interesting and instructive thing to do. I usually advise a young man against it for a fairly definite reason—especially if he is not already a pilot. You could probably make something that would fly but the trouble would be getting a license for it. The engineering skill that goes into even a small modern plane is far higher than that required to build an automobile."



A BAD CRASH.

Training plane at Pensacola in which Byrd nearly lost his life in 1918 when he collided with another plane at 70 miles an hour. Both pilots were badly bruised and lacerated, but lived.



DICK AND VIOLET.

His pet at the Canadian air station; “Violet” looks anything but like his name.

Not long before Byrd left Pensacola for active war service he had a dangerous crash of his own. He was just about to take off from the surface of Pensacola Bay. He had gained speed and lifted his plane’s nose almost clear of the water. It was one of those bright sunshiny days with glistening white caps and fresh haze, which made flying even more exquisite a joy than usual.

Byrd, still a novice at flying, had his attention riveted on his own machine. He took great pride in the skill with which he was able to take off and land.

Suddenly he discovered a plane right ahead coming directly for him. This plane was only about two hundred feet away. As he was going nearly sixty miles an hour and the other plane at least that much, there was no chance of escape.

Luckily both planes were close to the water. They met almost exactly head on. The crash resounded from shore to shore. Everybody dashed out of hangars, quarters, and offices, sure that another Navy pilot had been killed. Fortunately both youngsters escaped. The planes were completely wrecked, crushed to kindling wood. Neither pilot was caught in the wreckage and both swam clear, though pretty well banged up.

CHAPTER VIII

ON PATROL

WHILE BYRD was training to be a pilot at the Naval Air Station, Pensacola, the Great War in Europe had almost reached a deadlock. There were millions of soldiers on both sides, but they weren't getting anywhere. They had dug into what was really one long trench running all the way across France; and there they stuck.

The Naval situation was almost equally static; that is to say, stopped still. Germany and England were the only countries that had big navies. The Russian Navy was out of it, never having been very large. The French Navy was mostly submarines and cruisers; as was also the Italian Navy.

Germany and England were somewhat afraid to go out and fight a big naval battle to a finish because if either side got badly whipped, that side would be pretty nearly sure to lose the war. In June, 1916, the German fleet had actually come out ready and willing to fight the British fleet. The British squadron of battle cruisers had run into this great force and engaged it under the command of the famous Sir David Beatty.

While Beatty was leading the German ships on, fighting for all he was worth, he sent frantic radios back to London asking to have the main fleet sent out. Of course Admiral Jellicoe, who had the main British fleet, put to sea at once; but the weather was so thick that it was some time before he could find Beatty and the Germans.

When the whole enormous armada did get together, it was late in the afternoon. A terrific battle ensued, known as the "Battle of Jutland." Many ships were sunk on both sides, carrying down thousands of helpless men trapped between decks. One huge British battleship, the *Queen Mary*, blew up with a fearful explosion. Night came on and the fleets gradually drew apart. That was the end of the main action. The Germans escaped back to port and the British, after futile pursuit, came home.

From that time on until the time Dick Byrd was doing his best to get into active service, the big fleets did not meet again. Naval warfare in the spring

of 1917 had settled down to two main activities: the allies did their best to convoy troops from America to England safely; the Germans did their best to torpedo food ships so that England would starve to death, and sink the transports so that the French line could not be reinforced.

By the Spring of 1918 the situation was very serious. It looked as if the German submarines might win the war. If they kept on at the rate they were going they would starve England before she could import enough food to keep her going. England, you know, depends almost entirely for her supplies on what is brought in from other parts of the world. So the Germans simply by cutting off her trade lines might ultimately have put her in a position where she would have to surrender.

As a result of this situation it became the duty of America not only to send men abroad, but to guard these men against submarines; also to protect British supply ships against the same menace in order that this strong ally would not be put out of the fight.

There were several ways in which our allied anti-submarine warfare was carried on. First, great mine fields were laid around England, especially across the North Sea. This prevented many German submarines from coming out. But spies told the Germans where the mine fields were and the submarines were able frequently to avoid them.

Another means of fighting the submarine was by our destroyers which were stationed at Brest in France, Plymouth in England, and Queenstown in Ireland. These destroyers searched back and forth, day and night, over the waters in which the submarines were active.

The third and often most important of all methods of hunting submarines was by aircraft. This phase of naval warfare was deliberately built up because the same pilots that were looking for submarines were later to be used in handling large bombing planes as soon as they were got ready by America. These bombing planes, it was hoped, would soon fly over Germany and, if successful, bring the enemy to her knees.

After we got into the war there was strong public feeling that we should manufacture a large number of airplanes and get them to the front as soon as possible. Navy men also felt that we should help our destroyers by having many aircraft on patrol duty along the coasts of England, France, and even America. Byrd had followed every detail of all this with scholarly attention. He knew even better than some men in Congress that we were behind in our manufacture of airplanes. He also felt that the enemy knew this. As a result the enemy's morale, or courage, was strengthened.

Byrd went to one of the authorities in the Navy Department and said:

“If you will only let me fly across with one of our big Navy planes, I can deliver it to our Commander in France.”

“But why take a chance like that?” asked the admiral he was talking to.

It was a big chance all right. For no plane could fly ten or twelve hours in those days and be sure of keeping on safely as planes can do now.

“Because I think it will impress the enemy a lot,” said Byrd, “if we can only show that we are delivering planes right from America to Europe.”

But his suggestion was not taken up. It was destined to be nine years before Byrd flew a plane from New York to France.

You see Byrd was a cripple. At least that was the way he was looked upon; and as a result he was put on the retired list. So what he planned and what he tried to do were not thought of as important as the plans and wishes of other men on active duty. I bring this point out to show what a tremendous handicap Byrd had to overcome to succeed.

He was sent on shore duty to the State of Rhode Island to assist the Governor in the formation of the naval militia. As we were not a seafaring country it was difficult to get good men to go into the Navy. A lot of men wanted to go, but they did not have the experience and knowledge of the sea which would make them good sailors.

“I hated the idea of not joining our fleet,” said Byrd. “But this new detail really did me a lot of good. I found that by arguing for the Navy, by describing the plight of our allies in the war, and by analyzing the ways we could help, I really was brought closer to our naval troubles than I ever had been before.”

One thing he did was to learn to make speeches. He hated this at first. He found it hard to get up in front of a crowd of people and talk easily and intelligently. He didn't like the feeling that they were all looking at him. He couldn't write a speech and memorize it; he didn't have time. Besides he was never sure what kind of audience he was going to speak to in advance. This was great training for him and is for every young man who must deal with other people: that is, to learn to stand up in front of them and argue in an entertaining and convincing way. There is no better schooling in the world.

Byrd did so well in Rhode Island that he was finally brought to Washington. From then on he had to do a lot of office work in the Navy

Department. He had to sit at a desk all day and write letters and look up information. It was wretched work for a man who loved the outdoors the way Byrd did.

Then there was the feeling of terrible inaction when all able-bodied men were out fighting for their country. This galled him more than he could stand.

Finally, he got into aviation. I have described some of the details of his training at Pensacola. This work was all right while it lasted. He felt that it was necessary for a man to learn to fly if he were going to fly as an aviation pilot. But, having learned, Byrd begged the Navy Department to send him into action.

However, he was still considered a cripple. (How strange it seems to write this when he has done so many wonderful things since that time. It goes to show once more how a man may succeed despite even physical handicaps.)

Finally the naval authorities listened to his entreaties. He was sent to Halifax, Nova Scotia, to build an airplane base. The plan was that when he had trained a sufficient number of men the whole group would be transferred into the war zone. In the meantime planes there would fly up and down the coast looking for submarines.

It is difficult now to realize how many obstacles there were in those days in doing a job of this sort. In the first place, the railroads were swamped with freight. Manufacturing plants were unable to keep up with their orders. All equipment and supplies that were available were sent abroad to the troops at the front.

Ammunition could not be made quickly enough to keep up with its expenditure, and the best men all seemed to be able to get orders in the war zone. As a result, Byrd found himself on a desolate shore across the bay from Halifax with almost no equipment and a handful of totally untrained men. With this material, he was supposed to put into commission a firstclass naval air station. His capacity for leadership saved him. Although the men had never seen him before, they were in the space of a few days willing to die for him. The same personal magnetism which had made for him so many friends in the past now came to his rescue.

He built quarters out of scrap lumber and fashioned a hangar for his one plane. He prepared to build others as more planes came along.

Scarcely had this work been finished when a man came running up from the beach shouting:

“Submarine in sight!”

“All right,” responded Byrd, “get out the plane!”

The purpose of the station was to patrol for submarines that had come across from Germany and to protect troop transports from their attack. But now Byrd was ordering out his plane when it was scarcely in shape to fly and his bombs had not yet come from Washington.

But Byrd was a resourceful commander. He borrowed two depth charges from some neighboring destroyer and attached them to his plane. This was an exceedingly dangerous thing to do because the depth charges were not made for the rough vibration they would suffer in flight. It was almost a miracle that Byrd got aloft and safely down without being blown to atoms.

He sailed off into the air and out to sea ten minutes after the first alarm. Just as he neared the location of the submarine, as reported, a heavy fog came down from the North. He found himself almost instantly enveloped in a pall of vapor through which he could see only a few yards. But even at that time, Byrd had made some progress in navigating through thick weather. He had developed a special compass and knew how to work dead reckoning when the line of the sea horizon was out of sight. Remember that the delicate instruments now used by flyers had not yet been developed.

By the most skillful piloting, Byrd managed to get his plane back to the station. Apparently the submarine heard the roar of his engine and was frightened off, for it did not reappear in that vicinity.

While not out chasing submarines, Byrd put in some time training his men to jump by parachute from a captive balloon which was sent up near by. Parachutes, like air navigation instruments, were not then as dependable as they are now. So this course was a dangerous one. But, thanks to the care and precision with which Byrd carried out the whole training, he didn't lose a single man of all the parachute jumpers that he taught.

Suddenly on November 11, 1918, the War came to an end. Byrd's dream of flying a navy plane across to help the allies vanished. Once more he faced the failure and obscurity of retirement.

CHAPTER IX

BYRD AND THE NC-4

EVEN before he got into flying, Byrd had a dream that some day he would fly the Atlantic Ocean. In the spring of 1920, just after the War, it looked as if his chance had come.

“What started you on this?” I asked him one day.

“Don’t you think it’s natural?” he retorted.

“I suppose it is, now that we have good airplanes. But when you first started talking and thinking about such a flight men were breaking their necks almost every day.”

He laughed. “If we never did anything without counting all the possibilities and assuming the worst would happen, we should never get anywhere,” he answered drily. “I realized that a plane in 1914 might not be able to fly all the way across the Atlantic Ocean. But I thought it could fly from Newfoundland to Ireland. If this could be done I knew people would become so interested in aviation that a lot of money and a lot of brains would be put into building planes that could probably fly all the way from New York to Paris without any trouble.”

That’s the way Byrd’s brain works. He rarely thinks of the danger that lies in his flights. He is looking ahead and picturing the effect of a successful exploit on the millions of people who haven’t the courage and energy to do such things. Men like Byrd are called pioneers. Such men built this country of ours. Without such men we should not now have the tall buildings, fast trains, fine radios, airplanes and a dozen other wonders that make this country the leading nation in the world today.

Byrd’s idea of flying the Atlantic was not a foolhardy one. He knew by test of engines in the Washington Navy Yard laboratory that an airplane engine would run enough hours to carry its pilot across the Atlantic. If it stalled, he knew that the type of seaplane with a boat hull which the Navy was building then would stay afloat for many days. By sending up rockets, keeping ships informed of the plane’s progress and course, and then

counting on a search being made if he came down, Byrd thought his plan for a trans-oceanic flight reasonably safe. Further he had a very clear idea of the advantage to mankind if an air service between America and Europe could be started. Most of all, such a service would make the nations better neighbors.

The history of ocean travel is a romantic one. Columbus in 1492 sailed from Palos, Spain, to the Gulf of Mexico in sixty-nine days, traveling from August 3rd to October 12th.

The American built clipper named *Lightning* on March 1, 1854, sailed from Boston to Liverpool and broke all records. A gale was blowing at the time. The ship's log showed a speed as high as 18½ miles an hour, fast indeed for a sailing vessel.

The quickest passage of any sailing ship across the Atlantic was made by the *Dreadnaught* from New York to Cape Clear, Ireland, in twelve days in 1859. The fastest transatlantic yacht record was that of the schooner *Atlantic* which crossed from Sandy Hook to England in 12 days 4 hours 1 minute.

It is interesting to see how steamships finally improve these records. The first steamer to cross the Atlantic was the *Savannah* of 350 tons burden, which left Savannah, Georgia, on May 24, 1819, and reached Liverpool in twenty-six days. The *Great Western* from Bristol, England, to New York covered the distance in 15 days, in April, 1838.

In the 90's the first real ocean greyhounds were built. In 1891 the *Majestic* narrowed the transatlantic time down to five days and a half. Seventeen years later the *Lusitania* cut a whole day off this schedule and crossed in 4 days 15 hours.

A flying machine making one hundred miles an hour can go about three times as fast as the fastest steamer. In other words, when we get our air lines from New York to Europe established we shall be able to leave New York one night right after dinner and be in London in time for dinner the following evening.

But is there any reason why such rapid traveling should be sought? This is the question that many people asked themselves when faster ships were being built and flying fanatics began to talk about air travel across the ocean.

There are several answers to the question; but they all boil down to one definite answer—yes.

The great reason that the average business man sees for swift ocean travel is the increasing flow of trade from one country to another. When

more cargoes are exchanged, more money is made, by all concerned. When more goods are exchanged, more goods have to be manufactured.

The same is true of passengers. When more people go abroad they come back and tell their friends and next year the number of passengers is increased. Also by having more people travel the actual cost per person is reduced. As a matter of fact, tickets abroad cost more now than they used to. But the reason is that a great deal more luxury is provided for the passengers; better food, better staterooms, faster service, and more entertainment.

But there is one great reason for transatlantic air travel that men with vision never forget. This reason has been the animating motive behind Byrd's efforts to establish a transatlantic service. It is that the closer people are connected, the better they understand one another. You may have a quarrel with the boy or girl across the street; but you do not dislike them for a long time because they are your neighbors. They have nearly the same sort of clothes and toys that you have, and they go to the same school and they play the same games. But if you quarreled with a boy who came to town and he left the next day for his home thousands of miles away, you might go on being his enemy for many years. You wouldn't be sure how he felt or what he did or what sort of person he was from your short contact with him.

The same thing applies to nations. Neighboring nations are more inclined to be friendly than widely separated nations. Quarrels between nations are wars. Wars are not like quarrels between individuals; they lead to destruction of life and property so terrible that for years afterwards the world shrinks with horror at the memory of them.

When the time it takes to cross the ocean is cut in half, in effect the distance between America and England or France is cut in half, at once these nations will become more neighborly and better friends. Troubles in England or France are seen by Americans and understood. As a result when differences come each is more inclined to understand the other fellow's point of view.

Successful transatlantic air service will probably be a great help in reducing the chance of war between America and any European nation simply because it makes people on both sides of the Atlantic neighbors, whereas before they were nearly strangers.

When he was learning to fly in 1918, Byrd began to plan on a transatlantic flight. He was down in Pensacola at the time. He got permission from the Commanding Officer of the station to fly out of sight of

land and see if he could navigate back. He tried using the same navigation instruments that a Captain of a battleship uses. The trouble was that the airplane went so much faster than the battleship that Byrd found that he did not have time to work out the mathematics necessary to fix his position after he had made his observation.

At this point Byrd showed his first ability as an inventor. He began to devise ways of navigating more quickly and more efficiently than the Captain of a ship had ever done. For instance, he knew that if a wind were blowing forty miles an hour across his course in every hour he would drift forty miles to one side in the direction of the wind, unless he changed course to correct for the wind.

One by one Byrd designed a new sextant, a drift indicator, a short method of working out navigation, and other contrivances to help a plane when she flew over the ocean.

With Byrd was working a man named Walter Hinton. He also was a young naval officer studying at Pensacola to be an airplane pilot. He was a vigorous young man with many of the same ideas of the splendid future of aviation that Byrd had. Today he is at the head of one of the important air schools in the country at Washington, D. C.

In the winter of 1919-20 the Navy engineers were at work constructing the biggest airplane in the world at the time. This plane was called the NC-1. She had four engines, a wing spread of 126 feet and a length of fuselage of 63 feet.

This plane would be considered enormously large even today. In fact the tendency now is to build smaller planes because the strength of such huge wings is dangerously reduced when the plane is thrown out of balance by a sudden gust of wind.

The NC Flying Boat, as she was called because of her boat type fuselage, could make a speed of about 75 miles an hour when she was loaded with her full cargo of fuel and equipment of 28,000 pounds. Just think, this is over five times as heavy as the plane Acosta and Chamberlin flew in 1927 to break the world's endurance record. The NC Boat had a crew of six men and could cruise about 1500 miles with full load.

By April there were three of these huge aircraft built and ready for flight. Commander John Towers was put in charge of them.

John Towers is an old ship-mate and friend of mine. He is still an active flyer and at present writing is in command of one of our big aircraft carriers.

I never knew a man who had the gift of putting such attention on details. I think it was this trait that made him so successful as a flyer. The pioneer airman must be willing to watch every one of the thousand items that make up a plane and her equipment. Any one of them may fail and cause his plane to crash.

I remember one day on the old battleship *Michigan*, the American Navy's first dreadnaught. I had command of a 12-inch turret on her. We were having gunnery drill when one of the complicated gun telephones failed. No one seemed able to fix it. John Towers, then a young officer, called his electrical assistants before him and said:

“What do you propose to do?”

The spokesman of the electricians saluted and said:

“There is nothing we can do, sir. The telephone just won't work. Guess we better wait until we get to the Navy Yard.”

“Wait nothing!” snorted Jack Towers. “We'll examine every telephone line on the ship if necessary!”

That is exactly what he did. He literally took the battleship apart in an electrical sense, and put it back together again. But he found out what was wrong.

The three NC planes were assembled at Far Rockaway, L. I. From there they were to fly up the coast to Newfoundland, thence across to the Azores, and to Portugal. Because of his long work in air navigation Byrd was picked as an invaluable member of the crew. But he was not allowed to go all the way because of his war service. The Secretary of the Navy gave this order because he wanted to reward the poor fellows who had stayed at home during all the excitement and had done the necessary desk work in Washington without which our military forces could not have operated in Europe.

On the very day that the ships were to go, May 7, 1919, a terrible accident happened at the station. A navy flying boat was cruising around in the air over the little squadron about to set forth on their great adventure. Suddenly she went into a tail-spin.

Directly below the falling plane was a huge gas tank. Right into the middle of this structure crashed the plane. Both wings were ripped off and the men in her killed. The people at once predicted that this accident indicated the transatlantic flight of the NC boats was bound to end in tragedy.

As a matter of fact, this flight was a great success.

The three planes got to Newfoundland safely, and from there flew out over the Atlantic to a place called Ponta Delgada, a little town in the Azore Islands. On the way two of the planes were forced to descend. They landed in very rough water out in the open sea. The waves were so high that they smashed the fuselage of the machines, tore the fabric off their wings, and nearly drowned the brave men aboard them. Meanwhile naval men-of-war were making a desperate search over the rough waters into which the planes had disappeared. But a big storm came up just at this time and it was impossible to see any distance. So day after day the miserable men in the planes were thrown about in their drifting wreckage, every minute expecting to be precipitated into the sea.

John Towers finally drifted near enough to one of the islands to taxi in under his own power. My old friend Pat Bellinger, now a brilliant Commander in the Navy, was picked up by a passing ship. Only Commander Reed was successful in bringing his plane by air into the islands. A few hours later he took off again and continued to Portugal, the first man to cross the Atlantic by air.

Byrd's disappointment at flying to Newfoundland in the NC-3 and then not being a member of the final crew to go across was great. But he had a secret joy in knowing that the safety of his friends was in a very considerable measure due to the work he had carried out in making the instruments and the plane for the flyers. Moreover, he laid the foundation for his still greater success a few years later on.

CHAPTER X

A TERRIBLE DISASTER

ONE of the most thrilling adventures in Byrd's life was his experience in August, 1921 with the great British dirigible R-38, known in the American Navy as the ZR-2. He came within a hair of losing his life in the terrible disaster that happened when this dirigible was lost.

The ZR-2 was built after the war because the world began to realize how far the Germans had progressed with dirigibles. Count Zeppelin of Berlin had for many years built big aircrafts filled with hydrogen gas and equipped with engines to drive them ahead. During the years 1900 to 1914 these big ships traveled about Germany and finally became commercially successful. They carried passengers, express, and occasionally a little freight.

Dirigibles are distinguished from ordinary aircraft in that they are lighter than air. In the Army and Navy we speak of the "Lighter-than-air Service." The airplane is, of course, heavier than air. It is kept aloft by the kite effect of wings. When war came the Germans flew over London in zeppelins and dropped bombs. This proved that day or night, in fair weather or foul—provided the wind were not too strong—that a dirigible was a suitable weapon for war.

The trouble was, and is, that a dirigible floats in the air just as a ship floats in the ocean. But the Captain of an ocean liner would consider that he was in dreadful straits if a current of twenty miles an hour suddenly struck his ship. Whereas the Captain of a dirigible is pleased when the wind doesn't exceed twenty miles an hour.

The huge bulk of a dirigible is at the full mercy of every wind. If the wind is thirty miles from ahead, and the ship is flying at sixty miles an hour, her speed over the ground is only thirty miles an hour.

Then there is the even more important point that the net weight must be less than that of the air displaced. Otherwise she wouldn't float. This makes it necessary for the construction of a dirigible to be as light as possible. But this very lightness makes her a weak structure.

One advance has been made in recent years with a metal called duralumin. This metal is very much like aluminum, but less brittle and more durable. Girders of duralumin make the skeleton of our modern American dirigible, the U.S.S. *Los Angeles*. Between the framework hang big gas bags containing hydrogen or helium. The U. S. Navy uses helium because it is not explosive. Unfortunately the ZR-2 was filled with hydrogen, which is terribly inflammatory gas. Lightning, a spark from the motor or a match from a smoker will set it off in a terrific explosion.

The ZR-2 was being built for the American Navy. Our workmen possibly could do better work than the British workmen, but we had not made the advance in America that aircraft builders had in Europe. So we ordered one built and flown over by the British officers. We sent a group of officers and men to England to learn to handle this type of ship.

At this time Byrd was still trying to make a flight across the Atlantic alone in a plane. He felt that the NC-4 had done tremendously well but that she had not actually made a complete traverse of the sea because of her stop in the Azores.

When Byrd asked the Secretary of the Navy to let him go, the Secretary, who at the time was Theodore Roosevelt, Jr., said:

“I’ll let you go if you want me to. But we don’t want to lose you, Byrd. We need you in the Navy. Why don’t you wait until the Navy develops an airplane that can make a flight clear from New York to Europe without a stop?”

After some discussion Byrd finally agreed not to make the hazardous attempt. Instead, he asked to be allowed to cross the ocean from England to America in the ZR-2.

His request was granted in August, 1921. He crossed to England and reported to the Embassy in London.

“You are just in time,” the Naval Attaché told him, on arrival, “for the ZR-2 is going to make her first flight tomorrow.”

“May I go up?” asked Byrd.



JUST BEFORE THE DISASTER.

The huge airship ZR-2 (R-38) emerging from her shed on the morning she exploded.



WRECK OF THE ZR-2.

By the merest chance Byrd failed to go aboard the ZR-2. He told his friends “goodbye.” The ZR-2 rose; then before the horrified eyes of the onlookers she exploded!

“Probably,” said the Attaché. “But I cannot be sure. You see they have planned this flight for some time. Every billet is taken.”

“I should certainly like to go!” said Byrd, eagerly.

Probably there was a touch of pathos in his voice. So many times he had missed doing the very thing he had wanted to do.

The Attaché took a little pity on him.

“I tell you what you do, Byrd,” he said. He reached for a time-table in a desk drawer, glanced through it hurriedly, and added:

“You’ve got eight minutes to catch a train down to Howden. Grab a taxi and you’ll be there tonight. Probably they can squeeze you in some place on the ship.”

Byrd hurried out and raced for the station. By two minutes he missed the train. By those same two minutes his life was saved.

The next train brought him to Howden very late. The list of those to go up on the ZR-2 was fully made. Commander Maxfield, the Senior American naval officer present, told Byrd how sorry he was he could not do anything for him.

“There is a great demand to go up, Dick,” he said. “But don’t worry. You’ll have plenty of chances later. And then you’re going to make the trip to America with us.”

Very miserable Byrd sat up late that night with his old friend Commander Coil. One strange thing Coil said that Byrd remembered long afterwards. It was:

“Dick, I wonder if you know how worried everybody is about the ZR-2.”

“No. I thought she was supposed to be a great success.”

“She is. But I have never seen a lot of men so solemn about their work. Makes me almost feel as if something were going to happen.”

Coil’s wife said later that her husband had had a real premonition of the disaster soon to follow.

One last effort Byrd made to get aboard the ship. By talking with some of the British officers he discovered that one of the mechanics was not really needed. This was a mate named Steele. Byrd went to him to try to talk him out of taking the trip. But Steele begged Byrd not to interfere with his going because he had already sent his baggage and his family down ahead to Pulham, the destination of the ZR-2.

As on the coast of Newfoundland when he had watched the transatlantic flyers spin off across the ocean, once more Byrd stood aside and saw his friends climb aboard an airship for a flight he had so longed to take himself. It did seem as if fate were against him.

“It was a mixed feeling,” he told me in describing that morning, “that came over me as I watched the big shiny airship lift slowly into the air. The sun was just rising in a cloudless sky. The ZR-2 reflected the ruddy tints of the early morning light and seemed as beautiful as any creation man had ever put together when she sailed away.”

Sadly Byrd turned to take a train back to London and thence to Pulham, where he was to rejoin the ship. He knew he would have a chance later to go up in her. He knew that there was no reflection on him in his having been refused a place. But the edge of his excitement, growing through three weeks of great anticipation, was taken off by not being aboard the dirigible on her trial trip.

He landed in London that afternoon. He went into a barber shop to get a haircut before taking the train to Pulham. Twenty minutes later he stepped out. A newsboy ran by shouting. Byrd’s heart stood still. What the newsboy shouted was:

“Extra! Read about the terrible accident!”

Byrd grabbed a paper out of the boy’s hand without even waiting to pay for it. This headline met his eyes:

“R-38 EXPLODES IN AIR OVER HUMBER RIVER.”

It was true. In her turning tests to find out if her rudders would work properly the enormous dirigible had broken in half. Breaking of her framework had ripped some of the big hydrogen gas bags open, releasing the explosive gas inside. Sparks from the hot engines ignited the gas. There was a dreadful crash audible on the ground two thousand feet below, and a lurid flame shot from the broken body of the stricken craft. Down she came, in two great pieces. Human bodies fell out of her head over heels. Two men came hurtling down on a parachute which was not large enough to break their fall. Others fell in the wreckage. The Commanding Officer, brave General Maitland of the British Air Service, was found with his hand gripping the ballast valve. He died a hero at his post.

Byrd was put in charge of looking after the American interests concerned. He hurried to Hull, the little town on the Humber River in England into which the airship had fallen.

At daybreak he stepped off the train. Without waiting to go to a hotel he ran the few blocks to the river. Although still early, the morning light showed a crowd of grieving friends and families looking out over the dark waters. Several hundred yards out a bit of wreckage showed above the surface. This was all that was left of the beautiful machine Byrd had seen sail away the morning before.

CHAPTER XI

LIFE WITH THE ESKIMOS

IN the spring of 1925 Byrd was out at Chicago where he had established a station for the training of naval aviators in peace time. One day a telegram came for him to report to Washington at once. He rushed down and caught a train, wondering what was up now. Perhaps he was going to have a chance to fly across the Atlantic after all.

“It doesn’t seem possible,” he told one of his messmates, “after all the setbacks I have had.”

He was right. When he got to Washington it turned out that the idea of a flight across the Atlantic had suddenly given way to a far more spectacular plan, that of sending the big American dirigible *Shenandoah* across the North Pole. What had happened was this:

Captain Bob Bartlett, the famous skipper whom Peary had had for so many years, had come to Washington with a plan for an Arctic drift. He was going to take a ship up into the Polar Sea, put her in the ice and drift around for seven years.

But he couldn’t get people to put up enough money. What most business men told him was:

“Captain Bob, I think this Arctic exploration is all foolishness.”

The very morning he finally gave up his project, he walked disconsolately down Pennsylvania Avenue towards the Capitol. Suddenly, overhead he heard the sound of engines. Glancing up he saw floating in the blue sky a huge silvery cigar-shaped body. Under it four engines buzzed. Right in the middle of the street he stopped. He had a hunch. Why not send the *Shenandoah* across the North Pole?

To which the Admiral replied:

“Very dangerous, Captain Bartlett. But I believe it would be a great thing for the future of the dirigible.”

So Admiral Moffett—the big Admiral with whom Captain Bartlett was talking—put it up to the Secretary of the Navy. Twenty-four hours later, President Coolidge appointed a Board of Captain Bartlett, Admiral Moffett, myself and two other officers, to make plans for flying the great Navy dirigible over the Polar Sea and the North Pole.

At this point Commander Byrd was wired for. He was known to be one of the most daring and intelligent officers in the Navy, and at the same time to have specialized in aerial navigation.

When Byrd arrived in Washington the Committee had gone forward at a great rate and was almost ready to put the *Shenandoah* into commission for her long flight north. The idea was for her to go to San Diego, thence to Alaska, and finally over the top of the globe and down into Europe.

At this point Congress stepped in and said: “No. If anything happens the American people will blame us all for having let good men die in a vain endeavor. Besides, what good will such a trip be?” So the party was called off.

But by this time Byrd, with his usual industry, had gone ahead and collected a whole lot of information, instruments, books, and other material, which he would use on a Polar flight.

“What’s the use of throwing it all overboard?” he asked himself.

That night, while dining with Captain Bartlett, he got the answer. He said to the Captain:

“Why not fly in an airplane from North Greenland out over the Polar Sea and find out if there is land in that enormous unknown area above the North American continent?”

To which Captain Bartlett replied:

“Go to it, old fellow. That is if you have the nerve to fly an airplane over such a dangerous country.”

That’s how Byrd got into Polar aviation.

He knew that if he was going he would have to sail from New York in June or early July and count on doing his Arctic flying in August. September is a month of freezing and snow in the north; and the early summer finds the fjords still jammed with ice.

With characteristic energy Byrd set about gathering men and material. Edsel Ford, who had just met the brilliant young naval officer, started the

ball rolling with fifteen thousand dollars. The Navy provided two planes, a group of mechanics, and pilots, and equipment such as radio, etc.

The party sailed from New York in the steamship *Peary* in June, 1925. After a tempestuous voyage across the North Atlantic landfall was made at Cape York, on the west coast of North Greenland. Thence the ship wound around through dangerous drifting icebergs along the coast of Smith Sound.

In early August a base was established at Etah, North Greenland. This was the northern limit of the little tribe of Smith Sound Eskimos which had helped Peary get to the Pole.

I want to pause here and tell you a little about this tribe with whom Byrd lived and worked. I lived with them myself for nearly four years and know how wonderful they are. Byrd picked them because he knew they would give him more information about the North than all the books in the world. He knew they had helped Peary get to the Pole. He knew that for centuries they had lived in the ice and snow and cold and darkness and still seemed to enjoy life. So he determined to learn what he could from them.

There are only about two hundred people in this tribe, men, women and children. They live on the bleak rock-bound coast of the northwest corner of Greenland. Up and down for about four hundred miles of shore they wander, winter and summer. They can go no further north than Etah and live, because the ice in Smith Sound prevents their getting the sea game off the coast and the terrible glaciers inland keep caribou away.

The Eskimos live in tiny villages. Each village consists of only two or three snow houses or igloos. In the summer time they live in tents made of sealskin. Their clothing is entirely of the skins of animals; caribou or sealskin the shirts, bear skin for breeches, and sealskin for boots.

From the day of his birth to the day of his death an Eskimo never takes a bath. Once when I was living among them a calm clear sunshiny day came. We were out hunting walrus on the edge of the ice on Smith Sound. The temperature was only about thirty-four degrees above zero. But it seemed so warm and balmy compared to the windy bitter days that we had been having, that I couldn't resist the temptation to take a swim. So I jumped out of my skin clothes and poised on the edge of the ice. The Eskimos all began to yell and jump up and down. They thought that I had gone "pibloqtok" or crazy. I dove in. The cold water was a terrific shock. But an equal shock was the chorus of shouts that met my ears as I came out. At least twelve Eskimos had gathered at the point where I jumped off and were yelling at me. They were sure the spirits of the sea would seize me from below and drown me.

An Eskimo has no regular work. He doesn't make a living. He doesn't know what money is. He must get enough meat to feed his wife and children and dogs; and enough skins to make clothing for the family and harness for the dogs; and keep his igloo tight against the wind. When he has done these things he is satisfied.

When good weather comes, winter or summer, the Eskimo hurries out and starts hunting. As long as the good weather lasts, he hunts night and day. He sleeps when he cannot stay awake any longer. In fact he doesn't understand sleeping at any regular time.

One day Ootark said to me, "It is silly to be quiet when other people sleep."

"But why wake them up?" I asked him.

"People wouldn't wake up if they were really sleepy," said Ootark.

Byrd found hunting in summer an important study. If he were caught over in Ellesmere Land or on the Polar Sea, he would have to get back by walking and hunting as he went.

In summer the Eskimo hunts seal and walrus from his skin kayak. This is a little narrow boat like a canoe but decked over. Its framework is of bone covered with sealskin sewn together. The Eskimo paddles up quietly to the walrus or seal; and, when he is close enough, throws his harpoon. The head of the harpoon sticks into the animal's skin. A long line runs from the head to a sealskin float. The animal swims away, dragging the float. After half an hour or so he tires out; comes up to blow, and must stay up long enough to pant for a few minutes. Then the Eskimo paddles up and drives into the lungs of his prey a long killing iron. Water rushes into the hole thus formed and the animal drowns.

Small game, such as ducks, sea gulls and foxes, are caught by snares. These animals are looked on as delicacies. Eskimo candy is made by sucking eiderduck eggs and spitting them into the intestines of a seal. The disgusting mess is then frozen into yellow sticks.

Byrd was also interested in the winter hunting, though he did not have a chance to see any. He knew that his ship might be caught and he and his men have to spend long dark months among the Eskimos or floating around in the ice of Melville Bay.

Caribou, polar bear, and walrus, are secured in the winter time. Caribou inhabit the narrow strip of land between the sea and the inland ice. Eskimos stalk them just as our Indians used to stalk deer.

Polar bear are easier to kill. The Polar bear is really King of the north. He is not afraid of anything. If a wolf pack comes after him he sits down and waits for them to get tired and go away. If they try to bite him, he gets up and knocks them over with his paw. He lives by creeping up on seals, stopping dead still when the seal wakes up and looks around, and finally kills the poor creature with a blow of his paw.



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“THIS IS MY GOAL.”

Dick Byrd explaining some of his plans to Navy officials in Washington.



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BYRD EXERCISES BEFORE BREAKFAST.

Night and morning, no matter what other work is on, Dick Byrd goes through a strenuous routine of physical drill.

Eskimos walk right up to the Polar bear and watch their chance to drive in a killing iron. Sometimes they lasso the bear and four or five Eskimos get on the ends of two lassos and choke the big animal to death. This is an exciting tug-of-war but a cruel way to kill the unfortunate bear.

Without dogs the Eskimo would starve to death. His dogs carry his sledges out across the ice to the edge where he kills walrus in the winter and seal in the summer. The dogs round up bears for him, bring back meat, and carry his family up and down the coast.

The Eskimo dog is probably the toughest animal in the world. I went out one morning and saw my king dog sitting some distance from the team with a foolish look on his face. From his mouth hung a two-foot oaken whip stock. In the night he had gradually chewed up and swallowed a twenty-foot whip. This whip was made of tough sealskin which he could not bite in two.

I was puzzled to know what to do. But my friend, Etukashuk, said he would fix the dog. He pushed the poor fellow over with his foot, grabbed the whip stock and hand over hand pulled the long line out of the creature's stomach!

When Byrd saw how tough and strong these dogs were he went to Bennett and said:

“Floyd, we must have some of those animals with us if we ever go to the South Pole. No telling what kind of trouble we will get into. And when we do I would like to have a dozen or so of those dogs around to help us out.”

Sure enough, as this is being written, Byrd is collecting nearly a hundred hardened Eskimo dogs to take to the Antarctic with him.

Byrd also learned what fine travelers and helpers the Eskimo men are. He hopes to take some to the South Pole with him, or to have some sent down after he gets there.

From one of Peary's North Pole men he learned the story of the time that Peary nearly lost his life on the Polar Sea. This adventure happened when the great explorer was trying to reach the North Pole in 1906. He and the Eskimos that were with him went as far as they could, breaking the world's record north towards the Pole. But as the tide had ruptured the ice field, making a wide lane of open water they had to turn back. On the way south they ran into more open water and had to stop. Day after day they waited. Food ran out and dogs began to die. They ate some of their dogs. The weather was terribly cold.

Finally the water froze and Peary and his men crossed on the thin ice towards land. In a few weeks he had reached the north end of Greenland.

Now follow this very closely: While Peary was out there with his men the ice was most of the time drifting east. He had instruments with which he could navigate and knew which way it was drifting. But when the party was leaving land the Eskimos had seen that the ice was drifting west. They did not know that the drift changed direction while they were out of sight of land. So when they got to Greenland they thought the ship was east instead of west. Peary knew that if his men went east they would not find the ship and starve to death. He tried to persuade them to go with him west to the ship. Finally in despair he said:

“I have a wife and I have two little babies. I love them just as much as you men love your wives and babies. Because I know how to navigate I know exactly where I am on the map. If you will come with me we will all get back safely.”

Peary's daughter had been born in Greenland. The Eskimos knew her and his wife. They knew how beautiful both were. So they realized that Peary must be right. They followed him and all got back to the ship safely.

Another story Byrd told me was the one with which the Eskimos often amuse their children. It seems that once upon a time a hunter went out to kill a big bear that he heard lived beyond the end of Greenland. He was gone for many weeks. He did not find the bear and terrible storms came. One by one his dogs died. He ate them. Growing weaker all the time he struggled back towards home.

Finally there was only one dog left. This was the fine big king dog of his team, a dog too strong to die. Though the Eskimo was starving, he could not bear to think of killing his king dog, whom he loved. But since he had no food he knew that he would die unless he could have something to carry him back to the village.

He went out from his snow igloo to where the faithful dog lay by the small sledge. With his long knife the Eskimo braced himself to dispatch the dog he loved so. The old leader looked up into his master's eyes and wagged his tail. Suddenly through the tears in his eyes the Eskimo noticed how hard the dog was wagging his tail. This gave him an idea. With a quick motion he cut off the dog's tail. Then he boiled it up into soup for both him and the king dog, and they both got back home safely.

CHAPTER XII

A DARING FLIGHT

AFTER a voyage of three thousand miles in July, 1925, the *Peary* with Byrd and his planes and his men aboard arrived in the fjord at Etah, North Greenland. As I have said, Etah isn't a town in the sense that we call a town. It is really a "place." In Eskimo, Etah means "the windy place." There are about four stone igloos, in which usually three or four families live.

The fjord is a deep narrow cut in the coast about five miles from its entrance to the inner end. It has been carved from the rocky coast of Greenland by huge glaciers. One large glacier, Brother John's glacier, named by the American explorer, Dr. Kane, still fills the inner end.

From the blue, iceberg-dotted waters of the fjord, high cliffs spring into the sky. These cliffs have red and green faces, colored so by curious northern lichens growing across the surface of the rocks. About halfway down the northern side a beautiful little waterfall tumbles into the sea.

The rocks form a nesting place for hundreds of thousands of dovekies or little auks. Every day after the sun swings over the Greenland ice cap these birds swarm out to sea. They search on the surface of the water for small jelly-fish. In the evening they swarm back and nest among the crags. Eskimos with nets catch the birds as they fly through the air and put them away in sealskins for winter.

Remember now that on Byrd's arrival it was daylight throughout the twenty-four hours. The midnight sun which goes round and round for nearly four months in that latitude had not yet set.

At 5.30 A.M., August 2, the morning after the *Peary* reached Etah, Byrd and his men set about unloading the planes. This was a discouraging task. The only landing place was a little beach about fifty feet wide and the same in length. This beach lay surrounded by huge rocks and boulders. As there are no trees in this part of the world, there was no shelter from the wind which swept down incessantly from the ice cap above.

Carefully the body of the plane was hoisted over the side. By means of boats it was taken to the beach. The huge crates which had contained the planes were broken up and laid down as a runway along the gravel.

Scarcely had the plane bodies been taken ashore than it began to snow. Gusts of bitterly cold wind drove the snow into the faces of the men until they could scarcely see or hear. Despite this, they continued working on delicate parts of engines, radio and other equipment until the two airplanes stood fully assembled.

Meanwhile the Eskimos lent what assistance they could. They were particularly good at pulling on ropes and helping with heavy weights. Through an interpreter, Byrd told them he was going to fly over into Ellesmere Land.

“You mean in that big motor boat?” pointing to the airplane.

Byrd nodded. “That is a motor boat but it floats in the air.”

The Eskimos shrugged as much as to say, “You’ve got to show me.”

All hands worked at top speed. Byrd realized that the short Arctic summer would soon come to a close. As it turned out, there were only fifteen days of “summer” in which he could count on working at all. By this I mean that between snow and low temperatures there were only two weeks suitable for outdoor labor. Out of this time there were less than four days suitable for flying. So it will be seen how remarkable Byrd’s work was that he did any air exploring at all.

It has been clear for years how efficient and tenacious Byrd is when he starts out to do something. He goes right ahead and does not stop for bad weather, fatigue, or obstacles that would stop many other men. Again and again he has proved this trait in his character during the war, during the first transatlantic flight, during his North Pole flight; and later, when he flew across the Atlantic.

The planes he had in Greenland were of the type known as amphibians. This means that they could take off from the water as well as the land. They had big bodies underneath like boats. Out of these bodies projected wheels that could be withdrawn when the plane was floating on the water.

In forty-eight hours the planes were ready for flying. This was a miracle considering how cold and miserable the men had been while working on them.

Big buoys were put down several hundred feet offshore to which the planes were anchored. The first night after the assembling job was finished Byrd was awakened by a quartermaster who reported:

“I think the planes are being blown ashore, sir!”

Byrd, who slept half-dressed during this critical period, threw on his outer shirt and boots and rushed on deck. A full gale was blowing. It seemed impossible that the planes could live through it. They dragged their anchors; but providentially just as they were going to crash on the rocks the wind died away. After this the planes were tied up astern of the ship.

Some carrier pigeons had been brought. Byrd knew that he might be forced to land on the ice of the Polar Sea or in Ellesmere Land across the sound. If he could send pigeons back with a message telling where he was, a relief party might possibly reach him.

Ten of the carrier pigeons were let loose for a trial flight. Byrd wanted them to become used to the neighborhood in which he was working. That afternoon, only four of them returned. The rest of them never came back. Big powerful Arctic falcons, much like hawks, had killed them. The small weak pigeons were not a match for the falcons.

On August 5th, Byrd started the engine of his first plane. The Eskimos lined the shore still not believing that the big motor boat, as they called it, would fly. Suddenly the engine began to roar, the plane moved ahead and threw up spray. The plane darted across the harbor. Just before it reached the other side it rose into the air.

“Ah-h-h-h!” exclaimed the Eskimos in unison. They could not believe their eyes.

“Byrd is a great spirit!” cried the leader, old Sipsu.

All day long the two planes flew about the harbor. It was necessary to find out whether they could carry the full load of food, ammunition, rifles, collapsible boat, radio and other material that must be taken on the long and dangerous flight across the unknown country.

The tests were a success. The engines never missed a beat. The planes carried their loads easily and there was every reason to believe that the next day two parties could set off into the great unknown area of the Polar Sea, which had never been looked upon by human eyes. I had got into it a little ways in 1914, but had found no land. Traveling by dogs and sledges we made slow progress over the rough sea ice.

But the Arctic cares for the plans of no man, not even Byrd. Next morning Byrd found fog so thick he could almost cut it with a knife. Then rain came. After this a gale blew up from the southwest. The rain turned to snow. It looked as if Arctic winter had descended in earnest.

But the day following, when the wind had abated a little, Byrd finally hopped off for the northwest. Side by side, his two planes cruised out over Smith Sound, the body of water lying between Greenland and Ellesmere Land. Below them lay mile after mile of ice. This great field choked the northern reaches of the Sound and was the barrier which prevented man for so many centuries from reaching the North Pole.

As he sailed along Byrd came down to within a few feet of this ice field to see if it were practical to land there in case of trouble; but he saw only broken, jagged ice cakes, upended by the tide and jumbled together by recent storms. He would have wrecked his plane and killed his men had he attempted to land. No more hazardous flying had ever been attempted up to that time.

After about an hour he reached Cape Sabine. There again, there was no place to land. With mixed feelings he looked down on the cold bare promontory which had such a tragic history in American exploration. There it was in 1884 that Greely and his party of twenty-five men stopped in their retreat south from a base further north. They had food for only a few weeks. The rescue ship had been crushed by the ice. It was autumn already. There was no way of escape. Broken ice and open water in Smith Sound cut the party off from the Eskimos in Alaska.

Greely reduced his rations to a point where the men had only about one quarter of what they ordinarily ate. He sent his strongest helpers out to hunt. Those who stayed behind built four low walls of rock. Over these walls were laid the two whale boats. This formed a small cramped shelter in which the weary men huddled. Wind leaked in through the rocks and snow drifted in between the boats. Truly it was a miserable situation. One by one the men died of starvation.

I visited this dreary spot in June, 1915. I saw the four low walls behind which the men died. In the center was a flat rock, blackened on its top, where the small fire had been kept going. Outside on the stony ground, scarred by ice, I saw half a dozen mounds of gravel. Here it was that the dead were buried below a few inches of covering, later to be taken south when the rescue party finally reached the pitiful handful of survivors.

"I looked down," Byrd told me later, "and tried to picture the misery of those dying men. Had they only known how comfortable I was, flying over the Cape at this moment, what would their thoughts have been?"

Up along the fjords of Ellesmere Land sped the planes. Below them huge ice cakes and icebergs dotted the surface of the waters. There was still no place where they could safely come down. As for the land, that was equally impossible. It rose up, as at Etah, nearly vertically from the sea. Sharp crags and peaks topped the cliffs. Just inland lay the rough ice of the ice cap, but constant wind and drifting snow had so scarred its surface that it, too, would have meant disaster had the planes come down.

Byrd and his men were much disappointed. They had counted on easily being able to lay out an advance base.

That night they returned to the ship weary and discouraged. The radius of the type of plane Byrd was using was great enough to let him fly to the Polar Sea and back. But in order for his men to be safe in case a forced landing were made, it was necessary that he have caches of provisions laid down between Etah and the sea ice.

Luckily sleep soon put discouraged thoughts out of the leader's mind.

Almost exactly at midnight an alarm came down from the lookout that an iceberg was drifting toward the ship. The huge mass of ice, seven-eighths of which was below the surface of the water, was headed directly for the helpless planes. Once more Byrd threw on his outer garments and dashed to the deck. It looked this time as if the planes were surely going to be crushed. The ship could not be moved because there was not steam enough in her boilers. The planes could not be started in time to get out of the way of the towering mass coming down on them.

Prompt action by Byrd saved the day.

"Bring up those sticks of dynamite!" he shouted through the hatch. Two minutes later one of his lieutenants ran up with the explosive. A dull detonation echoed from the cliffs a few minutes later. The iceberg fell, shattered. Byrd had blown it into small pieces by use of the dynamite, thereby saving his precious planes.

By morning a driving snow storm was sweeping over the anchorage. The deck was covered with a deep white fluff. Wings of the planes carried a dangerously heavy load of slush. Again it looked as if winter were upon the expedition.

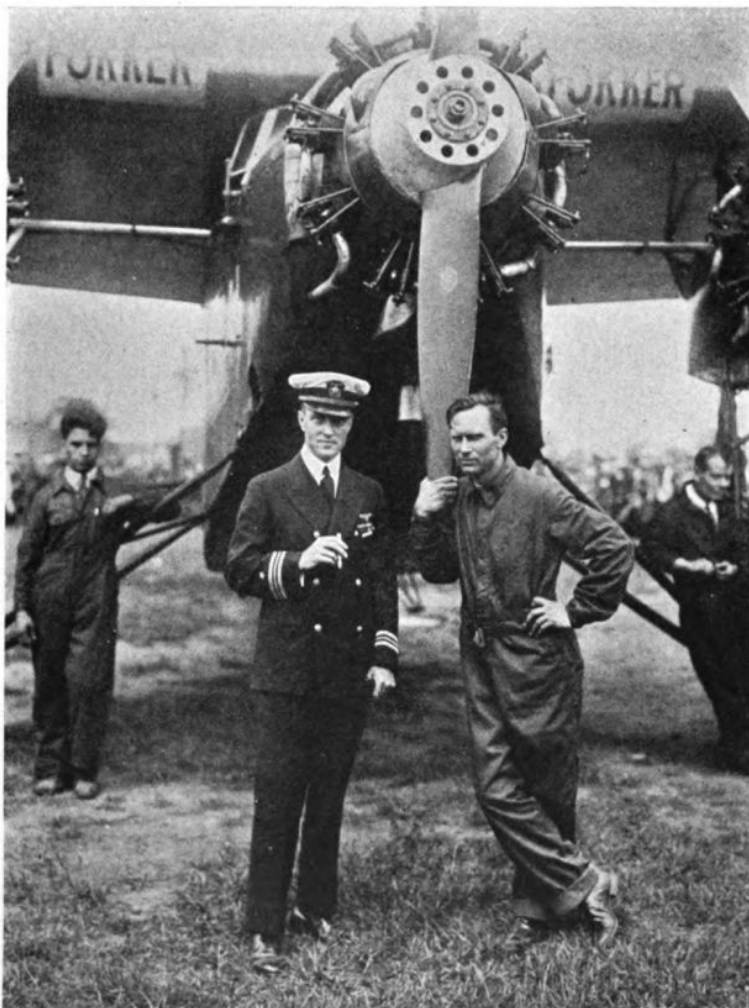
Not until August 11th could Byrd make his next full flight. At 10.40 in the morning all three of his planes got under way. He was determined this time to find a landing place between Etah and the Polar Sea. At an altitude of nearly seven thousand feet he passed over the eastern shore of Ellesmere Land. A bitter wind cut down from the north. The temperature was below zero.

At noon he was across the main Ellesmere Land ice cap. This is a great white glacier which rises from the fjord on either side and carries over into the coastal inlet on the west side. When Byrd told me about this wonderful flight, I could not help thinking about the time when I crossed with the Eskimos in 1914. We traveled from Etah up the fjords early in March. The temperature was from 55° to 60° below zero all the time. At the foot of the glacier we camped and cut steps in the solid blue ice. Slowly and wearily we carried our load of oil and pemmican up the glacier's face, a little at a time. It took us three days just to get up on the top of the glacier. By that time men and dogs were nearly exhausted by the hard work. Then came a long struggle over the ice cap. First came the up-hill pull, then the drag through the heavy snow, and finally the downhill run, made doubly dangerous by crevasses into which both men and dogs occasionally fell.

And now Byrd was skimming over this same white desolation at a speed more than twenty times as great and with almost no physical effort. Surely air travel has done much for exploration.

At first Byrd found no place on the west side for landing. But he came down at the inner end of Hayes Sound at a little open water free from ice. He tried to get ashore, but the place was filled with rocks and a sea was running. At last he had landed in Ellesmere Land only to find it impossible to lay down his cache.

But Byrd is a persistent man. His tenacity was never shown better than during this trip I am describing. Hardly had he got back to the ship than once more a cold wind and driving snow came up. One plane was nearly completely wrecked. It was hoisted aboard and an effort made to put in a new motor; but it was never able to fly again.



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DURING TEST FLIGHTS, 1926.
Floyd Bennett and Dick Byrd go over their Polar plane. Note that
Byrd is still a Lieutenant-Commander.



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JOHN D. ROCKEFELLER, JR. AND DICK BYRD.

Byrd tells one of his backers goodbye in New York before sailing for Spitzbergen.

After a hard week's work Byrd and his men set forth again in the other two planes. This time he landed in Flagler Fjord and was actually able to get within fifty feet of the shore. Nothing daunted, he and his men waded into the icy water to the beach. After an hour of hard work and misery, food and fuel for several men to last two months was piled up under the rocks. In addition there was left a stove, camping outfit, rifles, ammunition and

matches. After six hours absence the party got safely back to the ship again. The first cache was down, but painfully far from the final goal.

Meanwhile, radio reports had been sent to the National Geographic Society in Washington and thence distributed all over the world. At last Byrd's country was beginning to realize what a fighter he was.

Again a day later the heroic little party set forth in their planes out over the ice-covered land to the west. As they took off wind still sung through the ship's rigging and the temperature was lower than ever. Clouds hung over the ice cap. No more dangerous flight could be imagined.

This time Byrd was able to get his gasoline and oil and fuel into a small cache on the western side of the ice cap. But it was to no purpose. He had still five hundred miles and more to go to explore the unknown area in the Polar Sea, towards which he was headed.

That night when he returned to the ship he knew the game was up. Young or thin ice was forming on the Etah Fjord. Let this form a fraction of an inch thicker and the ship would be imprisoned for the winter. He dared not take the chance. He decided to turn south. In a sense he had failed. He had not gotten into the Polar Sea, nor discovered new land. But men who knew about his work realized that he had succeeded. For the first time he had proved the practicality of air travel in the far north. He had demonstrated the reliability of the airplane under the most trying conditions; and he had, in flying over the high lands of Ellesmere Land ice cap, set eyes on a country never before seen by man.

One other notable flight Byrd and Bennett made before crossing to Labrador and so home. Some miles down the Greenland coast, he stopped long enough for a flight over the Greenland ice cap. This is the enormous white ice covering of the interior of Greenland. It is over one thousand miles long and nearly 650 miles wide. Think of it, seven hundred square miles of solid ice.

This vast ice mass flows slowly down to the fjords in the form of glaciers and breaks off in summer time to make icebergs. Peary crossed it nearly thirty years ago. But Byrd was the first man to fly over it and gain an eye picture of its vast expanse and desolation.

CHAPTER XIII

A GOAL MEN DIED TO GAIN

AFTER DICK BYRD returned from Greenland he at once set about preparing for a flight to the North Pole.

For four hundred years men tried to reach the North Pole, which lies in the center of the Polar Sea. There wasn't any real sense in this long effort, at least sense that you can put your finger on. The Polar Sea is a mass of floating ice two thousand miles in diameter. The weather there is always bitterly cold; blizzards blow winter and summer. It is dark six months of the year. And there is nothing in the way of animal life to provide food in case you tried to live there.

Why should men suffer and die to reach this imaginary point at the axis of the globe?

This is a hard question to answer. Every man who has been to the Arctic is asked this thousands of times. Some refuse to answer. Others, like Peary and Amundsen, make their answers simple and direct, usually as follows:

The sense of going to the North Pole is the same as the sense of any sort of scientific research. When scientists two or three hundred years ago were sitting in their dark little laboratories investigating sparks, and queer-smelling chemicals and other phenomena, they did not have any idea what they were working towards. Yet today we have automobiles, radio, flying machines, and a thousand other wonders of modern life, all of which really have sprung from the investigations of industrious scientists who lived centuries before their dreams came true.

In the same way we cannot see now exactly what profit or use can come from the North Pole. It is surrounded by a lifeless white cold desert. You could not build a factory there; and you could not mine any oil or gold or iron in its vicinity. When Peary stood at the North Pole and noted exactly what the weather and ice were like, he was adding just a little bit to man's knowledge of the universe. Some day his addition may be turned to some good just as electricity and anesthetics have.

Such scientific research is called the addition of abstract knowledge, or knowledge which has no commercial application at the time it is learned.

In the early days of history men did not try to go into the Arctic regions. They saw that the further north they sailed the colder and darker it got. There was no point, therefore, in the Greeks and Romans trying to get into the Arctic. The Romans went to England and found a fertile country. But Iceland and Greenland, which were probably visited in those early days, were forbidden lands.

When Columbus discovered America everybody got terribly excited and realized that the earth was round. This meant that the gorgeous wealth of Cathay, as China was known in those days, was accessible over the sea. Hitherto it had been necessary to travel through the dangerous savage-infested land to the east of Europe in order to get to China.

The trouble was that sailors soon found their way west blocked by a huge continent, North America. Some of them tried going south around the continent. Magellan succeeded and circumnavigated the globe, but he didn't come very close to China. Other men decided the way to get to China going west over the ocean was around the north end of North America. In the ensuing search for a "Northwest Passage" began the great age of Arctic exploration which has just ended.

One of the first great Arctic explorers was Hendrik Hudson, who discovered Hudson's Strait and Hudson's Bay. He was a bold brave man and willing to take chances that his men would not take. But when he became weak through illness his crew, who were tired of hardship, set him adrift in a small boat with his only son and he was never heard from again.

The British, who were great seafaring people, sent expedition after expedition to find the northwest passage. Sir John Franklin with two ships and 149 men sailed nearly seventy-five years ago, up through the Archipelago above the American continent and tried to force his way through the ice out past Alaska. He was never heard from again. His ships were crushed and every one of his men died. For many years expeditions went out looking for traces of Sir John Franklin. America sent expeditions as well as other countries. This flood of Arctic voyages led to a great revival of interest in the Polar regions which gripped every adventurous young man in the western hemisphere.

In 1886 a young American got permission to go up on a small ship that was running commercially to the west coast of South Greenland. This was Lieutenant Robert E. Peary, U.S.N. When he saw the grandeur of the

Greenland cliffs, glimmering white ice caps climbing up into the blue sky, and felt the cutting air of the far north on his cheek, he was inspired to return and see if he could clear up some of the mysteries of the mysterious north.

For nearly ten years Peary worked in North Greenland. He thought that he might use the great Greenland ice cap as a broad highway to the North Pole. In those days, the late nineties, people did not know how far north Greenland ran. Peary finally, after great hardships, crossed the ice cap and looked out over the rugged ice-filled Polar Sea from the northern limits of the Greenland continent. He realized then he could not use this route to reach the Pole.

Next he set out trying the land to the westward of Greenland known as Ellesmere Land. This land was only partially ice-capped. Therefore he was forced to follow its coast.

Year after year he penetrated further and further north. One winter he had all his toes frozen off both feet and suffered fearfully before he gradually struggled back to his ship. But he was not daunted. He kept on until he reached the shores of the Polar Sea. On April 6, 1909, he reached the North Pole by sled.

Byrd studied Peary's work carefully. He wanted to know the secrets of the other man's success.

He learned the value of pemmican as a food. This native dish is a mixture of chopped beef and suet, with a little sugar to make it palatable. For fuel he decided on gasoline, which when put in a small pump stove makes one of the hottest fires known. With a little gasoline, some pemmican, and hard biscuit, Byrd knew that he could travel for many days on a ration of only two pounds per man per day.

Byrd learned how to handle the native clothing. He knew that he must keep his wrists, forehead and knees well covered, because at these spots a man's big blood vessels are likely to be exposed to the cold. He knew that the Eskimos in cold weather stand with their legs together, arms at their sides and their chins down in order not to expose these blood vessels. In this way no body heat is unnecessarily lost.

Gradually Byrd learned many other little tricks of travel that Peary had put to such good use. He found that grass, or excelsior, under his socks in his boots acts as an insulator against the cold. He learned how to sleep sitting up.

One thing that he spent a lot of thought on was where would be the best place from which to fly to the North Pole. He could go back to Etah, where he had been in 1925; or he could go to Point Barrow on the coast of Alaska; or he could go up to Spitzbergen, where Amundsen was going in the Norge. These were the three best places because ships could reach them, and there were people living nearby that could help out in case of extra work.

He finally decided on Spitzbergen, because the Gulf stream, which flows across the ocean from America and strikes Iceland and England, also helps warm the waters around Spitzbergen. Hence ice doesn't cut this land off most of the year as Greenland and Alaska are cut off. Byrd could not reach Etah until July, at least; whereas he was able to get to Spitzbergen by the end of April.

Another hard thing to decide was what kind of plane to use. He had flown in an amphibian plane in Greenland. This was one that he used on the water or land. But in flying to the North Pole most of his trip was going to be over ice. The only water would be in narrow cracks here and there on the great Polar pack.

He could not use wheels very well because they would sink into the snow. The only thing left to do was to fit his plane out with skis, a sort of wooden snowshoes that Norwegians use.

On looking all around he discovered a plane that had already flown 20,000 miles. This was a Fokker monoplane with three engines. If two of the engines were running at any time the plane could be kept aloft. This left him a factor of safety in the shape of an extra engine that could stop running.

The plane itself had a body 42 feet 9 inches long and a wing spread of 63 feet 3 inches. There were two 100-gallon gasoline tanks in the center of each wing. Two others, each holding 100 gallons, were carried in the body of the plane. In addition Byrd took some gasoline in 5-gallon tins which he distributed around inside the fuselage.

This huge plane was so costly that with the extra expense of fitting out the ship and buying food for the men Byrd did not have money enough left to take an extra plane. Therefore, if anything happened to his single plane he was a goner. His expedition would fail and his long trip would be for nothing.

A few weeks before the expedition sailed I sat in the Astor Hotel in New York and had breakfast with Bennett and Byrd. I was impressed with the

quiet assurance of both men that they would succeed. Byrd's head was full of the innumerable details of getting ready.

Every now and then he would look up at Bennett and say:

"Floyd, how about those chronometers?"

Whereupon Bennett would lay down his egg spoon and say:

"They are all right, Commander. But have you put in the order for those snowshoes?"

And so on until it seemed to me that both of them had more things in their head than any one man could possibly ever cram into his brain.

CHAPTER XIV

OFF FOR THE NORTH POLE

ON APRIL 5, 1926, Byrd and his party sailed from New York on the steamer *Chantier*. He had one plane aboard. As I have pointed out, this was an important matter because if anything happened to that plane the entire expedition was a failure.

In the party were about sixty men and a six months' food supply. Every man aboard was a volunteer. Byrd did not have enough money to hire his men. He simply had the news published that he was going to the Pole and that he hoped some American lads would go with him. To his great surprise he immediately had thousands of applications from men who were anxious to go with him. It looked as if every one wanted to fly up over the ice fields.

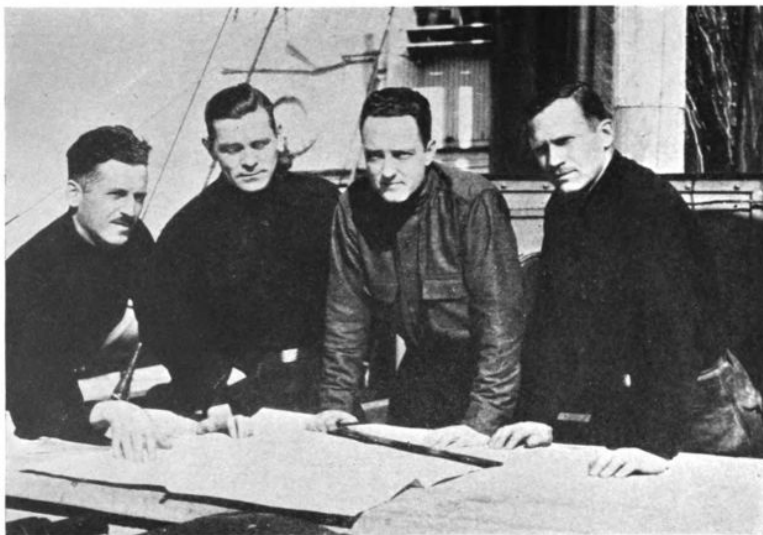
He had a hard time deciding whom to pick. But he had very simple ways of telling whether men were fit. First, he wanted their age to be between 18 and 35. He figured a younger man did not have enough experience; and an older one was likely not to stand the hardships of the journey well.



© *Wide World Photos.*

OFF FOR THE POLE.

***Chantier* steaming under Brooklyn Bridge just after leaving the New York Navy Yard for Spitzbergen.**



© *Pathé.*

DICK BYRD LAYS HIS COURSE.

With his assistants aboard the *Chantier*. At his right stands George Noville who later flew to France with him.

“Also I usually asked them if they had good digestions,” Byrd told me.

He felt this was enormously important because a man who could not stand the rough food, heavy weather and unending work would only be a burden on his companions. A good heart and lungs, a good digestion and a record of good health behind him made a man a fit candidate.

Captain Brennan of the ship had taken three men from the Merchant Marine. Chief Engineer Mulroy, a fine big fellow, had been to sea before. But most of the others were landlubbers who went because they were anxious for adventure. Some of them soon got their sea legs on. But others were terribly seasick and found the tossing of the vessel in the open sea very hard to endure.

On April 29th at 4 P.M. the *Chantier* arrived at Kings Bay on the west coast of Spitzbergen.

You will find Spitzbergen is a large island just north of Europe. It is buried in ice and snow and altogether desolate. But the fact that coal is found there from time to time has caused a village to grow up while shipment of this fuel was being made to Europe.

In the 16th Century Dutch, French and English ships used to congregate in Kings Bay when they were on their annual walrus and sealing trips. There are some hair-raising tales of the terrific battles that used to go on between the sailors of these various fleets. But when Europe became more peaceful and when oil was discovered in the earth, the demand for hides and animal fat fell off. Now almost no sealing or walrus hunting is done.

Thirty years ago Nansen, the great Norwegian explorer, left his ship in the Polar Sea where she had been drifting for several years, and tried to reach the North Pole. Failing to do so, he and one man retreated south over the ice from latitude 86° 6', their farthest north, and finally reached Spitzbergen. There they killed walrus and polar bear and spent the entire winter in a little stone house with walrus skins for its roof. Their only food was raw meat.

It was on this desolate scene that Byrd looked when his little ship swung into the harbor and dropped anchor among the floating trash ice. On the way in the Captain had often to turn sharply to dodge big growlers, or bergs, which were swinging around in the swift tide.

Just inshore a broad white plain sloped gently upwards towards the snow-covered mountains. It was on this plain that Byrd planned to build a runway from which he could take off in his large plane.

The air was very cold. A penetrating raw wind swept down from the icy mountains nearby. A flurry of snow swirled across the harbor as the *Chantier* anchored.

There was no night. The sun swung around into the north and dipped behind the mountains for an hour or two, but did not go low enough to cut off the daylight. Byrd and his men were heartened by this. They knew now that they could work night and day in order to get their plane ashore and into the air.

“But how are we going to get her ashore?” presently asked Captain Brennan.

Byrd glanced in the direction the Captain pointed. There at a little dock lay the *Heimdahl*, a small Norwegian gunboat. This dock was the only landing in the whole harbor.

Byrd hurried ashore and asked the Norwegians if he couldn’t use their dock in order to get his plane from ship to land.

“Sorry,” they told him, “but we don’t dare let the *Heimdahl* lie out in the harbor. She tried it once before and was nearly carried away by the ice. Her holding gear is not strong.”

With dismal forebodings Byrd went back to his ship. He did not know what to do. There he was at his destination, his equipment aboard, his men eager to get started, and no way to get his plane ashore.

He held a council of war. It was decided to try a hazardous plan.

Several of the ship’s lifeboats were now lashed together. Heavy timbers were laid across from gunwale to gunwale. On these timbers was built a platform. While the work went on snow came again in a heavy smothering drift. The men were so blinded at times they could scarcely see the nails they were hammering. Ropes became coated with ice and so stiff that they could not be tied into knots. It was fearfully wearing work and all done in low temperature.

Meanwhile the main hatch cover was taken off, and the deck boom carefully rigged over it. A big line was passed around the body of the *Josephine Ford*, as the plane had been named, and it was hoisted up to a level with the deck. When the raft of boats and wooden platform were ready, the plane body was lowered down gently upon the platform.

“My heart was in my mouth,” Byrd confessed to me afterward. “Had our tackle carried away or anything happened at that point to let the heavy

fuselage drop, our expedition would have ended then and there.”

Through the drifting cakes of the harbor the raft was rowed and pushed. At times it looked as if the tide and current would carry the whole contraption out into the open sea where it would shortly have been broken up by the heavy waves.

But finally it reached the shore. Quickly half a hundred men jumped up on the ice, grasped the ropes that were passed along, and began to haul. The wheels of the plane ran up over the platform and upon the ice; but just as they were about to go up on the land snow, they dropped with a crash into the ice crack formed by the tide. However, Byrd had anticipated this. Instantly a dozen men jumped down and began to chop away at a great rate. Then the ropes were manned again and, with a great shouting and pulling, the Americans hauled the *Josephine Ford* into Spitzbergen territory.

Now began a job that most of the men had been familiar with many years before. A regular coasting place such as might be used for sleds was built by smoothing off and patting down snow for a distance of nearly a mile. To the head of this long runway the men dragged the plane. Instead of wheels, skis or wooden runways had been installed. The idea was for her to slide down the runway pulled by her propellers and so gain speed enough to take off.

Meanwhile news had come in by radio that Amundsen with his big dirigible the *Norge* was on his way north from Europe. Byrd did not consider that he was racing with the Norwegians; but the world looked on the whole thing as a grand competition to see who would be first to fly across the North Pole. So Byrd felt he would be mortified if America did not have her representative win.

The men especially felt this very keenly. They did not even undress when they turned in, but were prepared to work through the twenty-four hours if necessary; and on many days it was necessary. The ship's cook established a field kitchen near the plane. Meals were served right out in the open whether it was snowing or not.

A lot of heavy work had to be done in bringing big fuel drums up to the plane. The engines also had to be carried up; and both food and equipment for the flight. All this heavy work had to be done by hand.

Finally, all was ready. The plane stood poised at the head of the long white runway like a giant bird. The Norwegians and other local inhabitants came out for curious looks, wondering if the bold American flyer were

going to succeed. The crew of the *Chantier* assembled silent and tense. Byrd and his men knew that a crash would end the expedition. All his eggs were certainly in one basket.

The engines were started. Roar of the three great machines echoed over the hills as the cylinders gradually warmed up. Byrd and Bennett clad in their fur clothes got aboard. The plane started. Slowly she gathered speed. Then, suddenly, she tilted. There had been a bump or soft spot in the runway. This tilt was enough to throw her off her balance. Three seconds later with a dull thud the plane rounded up into a snowdrift and nearly upset. One of her skis was smashed to kindling wood.

The men dashed down to see if there was any chance of repairing the damage. Noville, second in command, set to work at once feverishly making new skis out of some oars. All night he and two other men worked away. Next day the plane was ready again.

Once more she started off. The motors were warm, fuel oil heated up, all equipment put aboard, and the two flyers were rigged out again in their Polar clothes.

Alas, once more the plane failed to take off. She was too heavy. She couldn't get into the air.

Meanwhile, Amundsen had arrived. It was only a question of hours before the *Norge* would be up and away for the Pole.



ASHORE AT LAST.

The North Pole plane reaches land ice after her precarious trip from the ship.



© Pathé.

FILLING HER UP FOR THE POLAR SEA.

The plane had 100-gallon fuel tanks in each wing. It was cold work, with a bitter wind always blowing.

One of the men later told me: "We certainly felt sick about it. It looked as if the whole thing was a bust. We had worked night and day and were pretty nearly all in. And now the blistering plane wouldn't fly!"

At this point Byrd decided to lighten his plane all he could. He took out every bit of food he dared. He decided to leave some of his spare clothing behind and reduced his other equipment to a minimum. He was amused when he found a good many souvenirs aboard the plane which he had not known were there. His men had put small articles into the machine hoping to

get them back at Spitzbergen as souvenirs when it returned from the Pole. Strange to say Byrd did not find a ukelele which afterwards went to the Pole and back with him.

Finally, on May 9, 1926, Byrd and Bennett hopped off successfully. The men ran cheering down the runway, threw their hats into the air and shouted their joy at seeing the plane swing around and finally head into the north.

In less than an hour Byrd was out over the Polar Sea. As he sailed over the rough ice and saw the lanes of open water and ridges of enormous white blocks below him, he realized how big the chances were that he was taking. But he had no thought of turning back.

Should the plane make a forced landing she would probably be crushed. Surely her landing skis would be broken. This meant that she could not get into the air again. The only thing for Bennett and Byrd then to do would be to walk home.

Byrd's plan was to build a little sledge for him and Bennett to pull in case this happened. They had spare clothing, extra food and fuel; also a rifle and a few rounds of ammunition. But their situation would be desperate in case it were necessary to walk back. In the first place, it would be impossible to make more than a few miles a day. From the North Pole back to Greenland or Spitzbergen would be nearly 500 miles over drifting ice fields. In this long walk probably no game would be seen. Experience of Nansen and Peary indicated that only very rarely did a Polar bear wander out over the icy desert. Near land an occasional seal had been reported. But to shoot a seal and to capture his body before it sunk were two different things.

And even if Byrd did get to land he might have an equal amount of difficulty reaching civilization. For by the time he should escape from the Polar Sea it would be summer. Temperatures would be above the melting point. Streams of water would be flooding the coastal ice and making a slushy mess of the hillsides. Surely the chances were a thousand to one against his ever getting back alive if the *Josephine Ford* had been forced down.

The duties of Byrd and Bennett while in the air flying towards the North Pole were very simple. Bennett did much of the piloting. He sat at the controls hour after hour guiding the plane according to the course which Byrd gave him.

Byrd did most of the navigating. Although he alternated occasionally with Bennett as pilot, it was his responsibility that the plane steer a straight

course and find the Pole, and then get back afterwards, a feat that had never even been attempted before.

Luckily the sky was clear. This gave Byrd a chance frequently to measure the altitude of the sun above the horizon. He used an instrument called a “sextant” to make this measurement. From the figures he read off the sextant he was able to compute how many miles he was from Spitzbergen and how many miles he had to go to reach the Pole.

From time to time he laid down his sextant and took up his sun compass. This small instrument, about the size of a baseball, he held up towards the sun. The bearing of the sun on the instrument, with the time of the day, made it possible for him to tell what course he should steer in order to go towards the Pole.

There was still another important piece of navigation work that Byrd had to attend to. This was observation of the ice field beneath him to see how much the plane was being set off to one side by the wind. This was called “getting the drift.” He had an instrument called a drift indicator. By sighting through the drift indicator he could tell whether Bennett should steer to the right or left in order to offset the effect of the wind blowing across his course.

Providence willed that the flight should be uneventful on the way to the Pole. Motors hummed along beautifully; wind was light; sky almost cloudless. At an altitude of about 2,000 feet Byrd could see at least 50 miles in every direction. Only a white desert of ice met his eyes. Not one single sign of life did he see.

All night long—but with the midnight sun always up—the *Josephine Ford* winged her way northwards. At 9.02 A.M., May 9th, she reached the Pole itself. But Byrd wanted to be absolutely sure of passing over his goal. So he signalled to Bennett (the engines were making too much noise for him to talk) to circle around the spot which they had reached. They flew in a wide circle, several miles in diameter, in order to make it possible to report that there could be no question about their reaching the Pole.

Surrounding them in every direction as far as the eye could reach were still the ice fields, no different from those over which they had been flying for many hours. It was the same sort of ice that Peary had reported at the Pole. There were a few cracks through which dark patches of open water showed. There were large icebergs lodged in the field and long lines of pressure ridges thrown up by wind and tide which gave the appearance of enormous stone walls.

At this point every direction was south. No longer was there longitude east or west.

For at the North Pole there is no east or west. At this point the day is six months long, the sun rising on March 21st and setting on September 21st. All summer long the sun goes around and around, rising for three months and then setting for three months. When it disappears below the horizon it does not reappear again for six long months more.

The moon also does queer things at this point. Every month the moon comes, circles up into the sky for about a week, and then circles down again for another week. For about two weeks in each month there is no moon.

No more desolate place can be imagined than at the North Pole. There is no possible way a man could live there unless food and clothing and some sort of fuel were sent to him.

Just before Byrd started back for Spitzbergen two very serious things happened: an engine started to leak and his sextant fell off from its table to the floor of the plane and broke its mirror without which it was useless. Either one of these accidents might have been fatal.



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DOWN THE RUNWAY FOR THE LAST TIME.

Note positions of Byrd's men who knew that one more crash meant the end of all their hopes.



© *Wide World Photos.*

NORTH POLE WELCOME IN NEW YORK, 1926.

To the cheers of hundreds of thousands of his countrymen Dick Byrd, hero of the day, marched up Broadway after his arrival from Spitzbergen.

But luckily the engine kept on running, and the sky remained clear. With the sky clear and the sun compass still at hand Byrd managed to keep Bennett on a straight course.

About seven hours later the white peaks of Spitzbergen came into view; and before they knew it Byrd and Bennett were stepping safely out of their plane and into the arms of their cheering shipmates.

CHAPTER XV

TO FLY THE ATLANTIC

BYRD'S next plan was a New York to Paris flight. His ideas, he tells me, had shaped up as follows:

Men first crossed the American continent in wagons called prairie schooners. Sometimes they took a north trail, sometimes a south. There were trails across deserts and trails over the Rockies. But finally all these trails boiled down to one or two good ones which were the result of many years of experimenting. And now on these good trails roads and railways ran.

Air routes across the Atlantic Ocean are going to be developed in very much the same way. And just as the prairie schooner finally gave way to the railway train, so will the steamship be replaced by the airplane and dirigible.

As matters stand now, the airplane may never be a really satisfactory ocean liner. The trouble is that gravity is always at work. Let the plane's engine stop and the passengers a few seconds later will find themselves in the sea. Even though the bodies of big planes be built like boats, this will not assure the safety of people suddenly dropped amid the high waves of a tempest in mid-ocean. No boat light enough to fly can be strong enough to be seaworthy for long.

In 1926 Dick Byrd knew a great deal more about all this than most men did. For twelve years prior to 1926 he had been planning a flight across the Atlantic Ocean. When in that year he finally flew to the North Pole, he and Floyd Bennett often walked up and down the deck on the way home from Spitzbergen discussing plans for a non-stop flight from New York to Paris, now that engines were so much more reliable.

"But is the plane to be the air liner of the future?" once asked Bennett.

"You mean for ocean flights?"

"Yes."

Byrd was silent. He knew as well as Bennett that the thirty-six hundred miles that would have to be covered from New York to Paris was a long hop

for a heavier-than-air machine.

“I don’t know,” said Byrd frankly. “Only time can tell. Meanwhile we must develop both.”

Thus it was that Byrd again, even after the ZR-2 disaster, had devoted considerable thought to the possibilities of the dirigible as a successful transatlantic airliner rather than the airplane.

At this writing, he reminds me, there have been even greater advances in the dirigible than there have been in the plane. The British are building the R-100, a huge airship over seven hundred feet in length. She is much like our *Los Angeles*; except that she has a large body built into her main framework. This body is subdivided into luxurious cabins for one hundred passengers. In addition to the cabins are dining saloons, a lounge, balconies, and other conveniences.

Further, the R-100 will have a cruising speed of 65 miles an hour and a radius of 4,000 miles. The same company which built her has already designed a ship that can cruise at 95 miles an hour for a radius of 6,000 miles. In this latter craft nearly two hundred passengers can be accommodated.

At the same time, Germany is rushing to completion of the LZ-127. This is a bigger ship than either the R-100 or the *Los Angeles*. She will be able to cross from Berlin to New York in two days and carry over one hundred passengers.

The reason for all this dirigible activity in Europe is obvious. Both England and Germany are anxious to capture leadership in transatlantic air service; and neither one is concentrating on airplanes. Both are putting their money and their energy into lighter-than-air dirigibles.

However, we are in this chapter talking about the summer of 1926. Byrd then felt that the reputation both of airplanes and of aviation could be improved by a successful flight with a heavier-than-air machine from New York to Paris. Further, he believed that such a flight in the space of little more than a single day would be bound to have a good effect on the relations between the two countries, then somewhat strained by the debt question.

So a few days after he came back from the North Pole Byrd called on Mr. Wanamaker. Rodman Wanamaker was one of America’s rich men with vision. For nearly twenty years he had also been hoping that an American would fly from New York to Paris. He was an old friend of the French, loving them as neighbors when he lived in Paris. And he realized how much

it would mean to both countries if they could be joined by spanning the Atlantic Ocean with aircraft.

It was not long before he agreed to buy a proper plane if Byrd would only fly it.

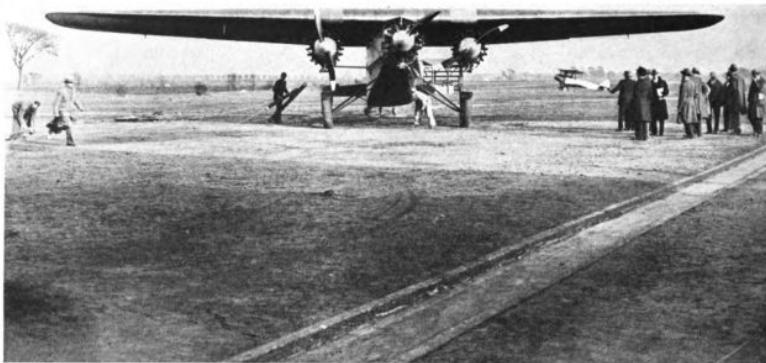
As a result of this agreement, early in the spring of 1927, Anthony Fokker, the famous airplane designer, began to put together a huge three-engined plane in his factory at Hasbrouck Heights, New Jersey. The wing spread of this plane was 71 feet; and it could carry at least 3,000 pounds more than the North Pole plane could carry. With this extra weight allowance Byrd could count on taking a great deal more fuel as well as a radio set. This meant he could not only fly all the way from New York to Paris but keep in communication on the trip.



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DICK GREETES HIS OLD FRIEND.

Floyd Bennett's badly crushed leg heals enough to permit him to visit the field, June 21, 1927. Noville left; Acosta right.



© *Wide World Photos.*

READY FOR PARIS.

The big America poised for her take off June 29, 1927, on her famous flight to Europe.

One of the serious obstacles he faced at this time was the necessity of a landing field big enough for taking off. A plane that weighs fifteen to eighteen thousand pounds cannot get into the air until she has reached a speed of around sixty miles an hour. Naturally, she must run for some distance along the ground before she can get up to such a speed. A plane is not like an automobile. She suffers much wind resistance in her wings and fuselage. And since the pull of the engine is applied to propellers instead of wheels the plane gathers speed much more slowly than does the automobile.

Although burdened with a thousand demands upon his energy, writing and lecturing, planning the technical details of his equipment and so on, Byrd found time to direct the preparation and building of a wonderful airplane runway on Long Island. This runway was over a mile long and smoothed out almost as flat as a concrete walk.

This is an important point because when Lindbergh arrived at New York, Byrd granted him permission to use the field. And by so doing Byrd really assured success to Lindbergh's effort. Lindbergh's plane was loaded down so heavily with fuel when he hopped off on May 20th that even with the long Byrd runway he barely got into the air.

In April the Fokker plane was completed. At the time I was in Paris making preparations for the arrival of the transatlantic flyers. I expected almost any day to hear that Byrd was ready to hop off. My first news of his flight in the new plane came one afternoon when I returned to the Hotel Continental in Paris and received a note from George Chamberlin, the well-known author, which read:

“So sorry to hear the news about Byrd.”

That was all. As I had been away in the country I had received no news. It must be bad news or my friend wouldn't have said he was sorry. I feared the worst. I wondered if Byrd had crashed.

This is what had happened: On April 20, 1927, Byrd's plane was ready for a factory test. He was weeks ahead of every other entry in the race to be first across the Atlantic from New York to Paris. Everything had gone smoothly, and both Mr. Wanamaker and Byrd believed that the huge *America*, as she had been named, would soon be winging her way eastward from New York.

In the afternoon Noville and Bennett joined Byrd over at the Fokker factory for the test flight. The plane had not been in the air before. Naturally neither Byrd nor his backer had accepted it. But Fokker had built thousands of planes. So Byrd felt there was no reason to believe that there would be any hitch in getting this one up.

Byrd decided to go and take with him his two men. Fokker, of course, as designer and owner still was at the controls. The crowd cheered as the big plane gathered speed and took the air. In every way she behaved as she was supposed to, at least as far as those below could see. She climbed rapidly and circled the field in wide sweeps.

But in the plane a state of nervousness prevailed. Fokker realized by the way she handled that she was nose-heavy. By signs he imparted this uncomfortable information to the men with him. He knew that with a nose-heavy plane he could scarcely count on bringing her safely to a landing. The minute she touched the ground she would be inclined to roll over.

He brought her down once, but rose again when he found he couldn't lower the tail enough. Byrd and Noville clambered aft to help the balance. Again Fokker dipped. The plane's wheels touched. For a moment everything seemed all right. Then, to the horror of the onlookers, the big man-bird upended and with a crash dug her nose violently into the ground. The next instant she had rolled clear over on her back.

Fokker jumped clear and was unhurt. Bennett, caught in the nose wreckage, had a leg broken, his skull fractured, and was badly cut and bruised. Byrd's left arm was broken and his body badly bruised. Noville sustained internal injuries.

By a single bad break of luck, through no fault of his own, Byrd found himself completely out of the transatlantic race. His plane was badly damaged and his two best men seriously, maybe fatally, injured. Once more Dick Byrd had to accept bitter disappointment as his lot. But once more he had the courage and sportsmanship to go through his misery in a manly way.

Noville soon recovered. But Bennett's injuries proved so severe that, though he survived, he was to be completely out of flying for a year.

Meanwhile the other entrants for the long flight hurried their preparations.

One, in particular, both Dick Byrd and I hoped would succeed. That was Noel Davis, a Lieutenant-Commander in the Navy and good friend of both of us. But Noel's plane could scarcely carry the enormous load of fuel required to get it across the ocean. So when, on trial flight with full load, it banked on a turn, its wing surface proved insufficient to hold it up. The plane crashed and poor Noel, with his companion, was killed.

Two other planes were rushed to completion and both reached Long Island before Byrd's *America* was ready.

One of those planes was the Bellanca to be piloted by Chamberlin; the other a Ryan, brought from San Diego by an almost unknown mail pilot named Charles Lindbergh.

Although Byrd had for years struggled to be first to fly from New York to Paris, he now showed his sporting spirit by helping his rivals in every possible way. He coached the Bellanca's navigator in ocean piloting and loaned his field to the Ryan, really thereby making possible Lindbergh's successful take off on May 20, 1927.

CHAPTER XVI

TO EUROPE BY AIR

AFTER long weeks of waiting Byrd decided on June 29, 1927, that the weather was right. The first man he got in touch with after making this momentous decision was “Doc” Kincade.

I must say a word about Kincade. Air pilots call him “the greatest motor expert in the world.” And there is a lot in what they say. “Doc” Kincade was the man who prepared the motors for Byrd’s Polar flight, for the transatlantic flights of Lindbergh, Byrd and Elder. In a sense, their triumphs were made possible by Kincade’s wonderful knowledge of gas engines.

When “Doc” Kincade was twelve years old he earned a dollar in Sunday School by memorizing the names of all the books of the Bible. He could hardly wait until Monday morning to spend his dollar. When the time came he bought a dollar watch with his money. Then he went right home with the watch and the first thing he did was to take it apart.

Now so far this is just about what any boy would have done. But the wonderful thing about young Harold Kincade, as he was then known, was that he put the watch together again and *made it tick*. He was so excited at his success that he took it apart once more; and once more put it back together again and made it work.

About this time his father came along.

“That’s a nice way to treat a watch!” said the father disgustedly, and took away the time-pieced from his mischievous son—at least he thought he was mischievous, not knowing then that America’s greatest airplane motor expert was already showing his talent.

From the watch “Doc” graduated to the family alarm clock. Only when he got the clock all apart he thought it would be foolish to do the same old trick of putting it together again. So he built a little boat and rigged up the works of the alarm clock in such a way as to make it run around the bathtub.



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BEFORE THE FLIGHT TO FRANCE.

Dick Byrd here shows the strain of long weeks of waiting—his plane damaged, his arm broken and Floyd Bennett hovering between life and death.



© U. & U.

TAKING OATH AS U. S. MAIL PILOT.

Byrd carried regular mail on his transatlantic flight, acting under the Federal Post Office Department.

Next day some of the boys came in to see “Doc’s” wonderful boat. It seems almost like fiction to write here that he sold the boat to one boy for enough to buy two brand new alarm clocks! This probably saved him from a thrashing he was due to get.

All this happened back in about 1905. When he was sixteen Kincade went to work in an automobile factory, a plant which later built aircraft. So for nearly twenty years he has done nothing except build, repair and inspect airplane motors. No wonder he knows them intimately!

Over the telephone wire about midnight on June 29, 1927, came a cheery voice.

“If you’re ready, ‘Doc,’ we’re going at dawn.”

It was the voice of Commander Byrd announcing that he was going to hop off that morning for Paris.

I lived not far from the field. Well do I remember the dreary rainy weather on that famous morning. Certainly it was no kind of day for a man to hop off on the most dangerous flight in the world. But Byrd knew from his weather reports that the chances were favorable for his having a westerly wind to help him across and yet a wind not too strong. The weather man thought the fog and clouds would soon clear up.

By dawn a large crowd had gathered on the muddy field. Many were friends of Byrd; the majority were great aviation enthusiasts. But not a few were there simply to see a man risk his life and the lives of three other men in taking a huge plane into the air for a non-stop flight across the ocean.

You see, only a year before Fonck had taken off from the same field for the same flight. He too bravely had mounted his plane and sent his engines roaring. But as his giant machine ran down the field she was seen to wobble. She was too heavy to get well off the ground. A slight depression upended her. She rolled over. A few seconds later came a lurid burst of flame. Fonck and his fellow pilot were thrown clear. Two fine men inside the plane were burned to death.

Over the same course Byrd now ran his splendid *America*, engines roaring and wind whistling through the wing stays. Lieutenant Noville sat at the safety valve of the big gas tanks ready to release the fuel in case of a crash. This device might save the lives of those inside the structure if fire broke out.

The heavy plane ran nearly the whole length of the field before she slowly lifted off the ground. A few ounces more in burden and she never would have made it. Yet her huge load was necessary because of the fuel required to send her the thirty-eight hundred miles she would have to travel to reach her destination.

Slowly she gained altitude. At last Byrd's dream was coming true. Over the same course he had flown in 1920, only to be forced by red tape to leave the NC boats just when they reached Newfoundland. Over the same course, along the Canadian shore, he had flown during the war while looking for submarines. And both times he had thought of the day when he might be winding his way to Europe in the flight of which he had so long dreamed.

Now at last he was off!

The weather report proved right, in so far as wind was concerned. A gentle breeze wafted the *America* eastward. It added nearly 25 miles an hour to her speed, until she was making over 100 miles an hour by the middle of the morning.

But the most dangerous part of the weather, in case the plane had to descend, was there full force: first, a dreary drizzling rain continued to fall, and one fog bank after another rolled in from the invisible ocean. Above the fog clouds hung low.

Byrd tried to climb above the fog and clouds, only to find himself out of one stratum into another. The cloud banks were miles deep. There was nothing to do but keep fairly close to the earth and check off what landmarks he could recognize through the murk.

Over Nova Scotia the weather suddenly cleared. Not for long, but long enough to give Byrd and his men a chance to look down for a trace of two brave French flyers who had disappeared a few days before. These flyers were Nungesser and Coli, who had hopped off from Paris, hoping to reach New York by air, flying west. It was thought that during their flight the Frenchmen had met thick weather and had gone off their course. Possibly they had wandered into the interior of Canada or even landed on the bleak Labrador coast. Had they done so it might have taken many weeks for them to have gotten out, especially if they were injured. But no fluttering signal or plodding figure met the eyes of the little group in the *America* now staring downward.

Soon came a very critical moment in Byrd's navigation. He was steering what is called a "great circle course." This meant he was not going on a straight line across a chart or map but following a line drawn around a globe, the shortest distance between two points on the earth's rounded surface. But in order to follow such a line it was very necessary that he see the town of St. John's in Newfoundland, or some other spot up there, in order to change his course which had been north and head easterly in the proper direction for France. He had a long dark night in the air ahead of him.

If he were not on his exact course it would be very easy for him to be miles away from where he thought he was by the time daylight came.

About 3 P.M. the fog shut in again. It was not that nice soft misty vapor one sees sometimes on a summer morning. Summer was there all right; but the cold north wind out in the Arctic Ocean was blowing down across the Gulf Stream, causing thick heavy wet mist to hang over hundreds of miles of the Canadian coast.

"I tell you," said Dick afterwards, "I had never known a thicker or wetter fog in all my seafaring experience. There were times when we could not even see the ends of our wings. Water streamed off our braces. I am sure there must have been many pounds of it resting on the body of the plane. Had it not been for our instruments, we could easily have flown in any direction, right or left, up or down, or even upside down, and not have known the difference. I can realize now how other planes have been lost almost in the twinkling of an eye in trying to cross the ocean. Their instruments go wrong just long enough to let them get started downward; and, before they can right themselves, they plunge into the ocean."

St. John's was lost in this impenetrable mass of fog. Only by dead reckoning, or roughly piloting the course, could Byrd tell how to steer his big plane so as to head for Paris.

As nightfall came down the air grew colder, bringing a greater precipitation of moisture. A drizzling rain began again to fall. This was exceedingly dangerous; for should the temperature go below the freezing point in a few minutes the plane could be so covered with ice that the extra weight would carry her into the ocean.

Byrd watched his altimeter with careful eye. Should he go too high he would strike a freezing temperature. At the same time, should he drop too low he might be into the ocean before he could zoom upwards.

At this difficult time came still another problem.

"I asked Noville how much gas he had used," wrote Byrd in his notes.

Noville turned to his pocket flash and did some rapid computing. He handed the bit of paper to Byrd, who studied the figures.

The result was disheartening. It looked as if the fuel would not last across the ocean. The plane could fly until the next afternoon; but at the speed she was making, even if a helping west wind came along, she could not possibly reach the French mainland with the fuel Noville found was left.

Fortunately this was not the case. What really had happened was first, that there was some leakage; and second, that Noville assumed that more gas had been used than actually had been.

At this point Byrd faced and made his first great decision on the trip: to continue in spite of all and try to make his destination. He had burned his bridges behind him. He knew his men were ready to follow him to their death, if necessary. So he courageously decided to go ahead and do the best he could. If he must fail he would fail gloriously.

One thing was in his favor. He was at a very high latitude; and since it was June, the time of the year when the days are longest, daylight came early. By 3 A.M. dawn was at hand. But still the impenetrable fog of the night before hung around him.

All hands had a sandwich. Yet none were hungry, despite the hard work and cold raw air. Nervous strain of the danger they were facing, realization that on account of short fuel they might never reach the other side, and the agonizing roar and vibration of the three huge motors, stunned their sense of hunger.

All that long day the fog continued. Byrd tried rising above it. Up to twelve thousand feet he climbed in his effort to escape the clinging mass of clouds that hung around him. At times he did actually emerge and was surrounded by "towering peaks, black pinnacles like mountain ranges," as he described them. These formations were the fog masses hanging over the sea.

Noville worked away at the little radio set. This set gave out automatically a signal which was repeated from time to time. Every now and then some ship would signal back that she had received Byrd's radiations. From these responses he was able roughly to check his position. As a result, and because Byrd himself is the outstanding air navigator of aviation, he was able to strike the coast of France almost exactly at Cape Finisterre, towards which he had hoped he was heading. Just about this time, shortly after dark, he was able to recognize on the French coast some of the towns which he had memorized for weeks before on the maps of France. Twinkling lights of the little coastal resorts and the flashing radiance of an occasional lighthouse told him that he was not far from the great Peninsula to the west of Havre. If he could strike Havre and continue up the Seine River he was sure to get to Paris.

But alas, the fiendish fog still had it in for the American flyers. Before they could see the Seine, before they had half a chance to head for Paris, the

heavy mist wall between the *America* and the land below closed in. After the wonderful feat of striking Cape Finisterre, and in spite of over two thousand miles of “flying blind,” it looked now as if Byrd could never land at the City of Paris, even if he flew over it.

For in thick air it is not safe to bring a big plane down too close to a city. At night one must be very close to surface lights in order to be able to level off properly.

But even then Byrd might have landed at Paris—for it was proved later that he flew over it in the dark—had not a curious and unexpected accident happened. His compass failed him. The first inkling he had of this was while hurtling through the gloom of the fog-laden air he suddenly saw below him the flashing light of a lighthouse that he had recognized as being on the coast. This meant that he had flown in a great circle and was back to the shore again.



FRIENDLY FRENCH HOSTS.
Byrd and Noville with some of the kindly villagers who took them in
at Ver-sur-Mer.



© *Wide World Photos*

THE *America* ON FRENCH SOIL.

Wreckage of the giant plane hauled up on the beach and surrounded by curious townsfolk.

Now had to be made a momentous decision. Byrd held in the hollow of his hand the fate of his companions. If he did the wrong thing he might cause the death of all in the plane.

Fuel was nearly out. There seemed to be every reason to believe that Paris was covered with fog—which was true. There was only one thing left to do that would give the party a chance to live. That was to bring the plane down into the water off the coast, yet near enough to land to permit escape.

By dropping flares Byrd was able to mark a small spot in the water toward which the plane was headed. But there was nothing by which to gauge distance. So when the landing gear struck it was sheared off as if by a knife. Next instant came a terrific crash and the ill-fated *America* plunged in.

Deafened by forty-two hours of roaring engines the men swam and waded ashore. Local villagers took them in. Next day the world was ringing with their narrow escape. And France, the hospitable, gave them a welcome so warm that it continued for many days.

CHAPTER XVII

WHAT IS LEFT TO EXPLORE?

ONE of the most interesting things a man like Byrd has to do is to plan out his life. A man in business goes along and carries out regular routine. If he does well and his business prospers, he knows that ultimately he will be well off, if not rich. The writer or other professional man can go on doing a little better all the time in his professional work. After a while he is established and makes a good living. He saves and so is independent in his old age.

But the life of an explorer like Byrd is entirely different. He has no routine that is not temporary. He must go from one expedition to the next; and, in Byrd's case, is always trying to build up aviation in addition to his regular work.

But what are you going to do next?—so many people ask him.

To which he usually replies: "I think I am going to the South Pole."

"But there are only two Poles, what are you going to do then?"

To which Byrd cannot reply in a few words. He can only say, as he has done to me, that there is an enormous amount of interesting work for the air explorer yet to do.

It is interesting that after Byrd came back from the North Pole in June, 1926, he had six excellent offers to go into business. Of course there were many more; but six of them were real and all promised a large salary. One of these offers was from a successful advertising man who was a partner in a great manufacturing plant.

"But we can give you \$25,000 a year," he explained, when Byrd positively refused to show any enthusiasm about his business.

"But I don't want to go into business," said Byrd.

"Why not?"

"Because I still have some exploring to do," declared Byrd.

“But, Byrd, there isn’t anything left to explore.”

Whereupon Byrd, who happened to be equipped to dispute the man, unrolled a chart of the world and showed him some of the things that are left for the explorer to see and find out on this great globe of ours.

I wasn’t there when Byrd talked to the man; but as I have heard him talk on this subject a number of times, I can guess pretty well what he said. It was something like this:

“In the brief span of years from April 6, 1909, when Peary stood at the North Pole, to May 21, 1927, when Lindbergh landed in Paris, eager adventurers have covered more of the surface of the globe than the whole preceding 1,000,000 years of man’s ascent from savagery.

“In less than a quarter of a century both Poles have twice been visited, the globe has been circled by airplanes, practically every high mountain has been climbed, many blank spaces on the maps have been filled in, lost tribes have been found, deserts reclaimed, oceans sounded, upper atmospheric strata explored, planets studied, the earth’s core probed, the ether pierced by radio, and eggs of the ancient dinosaur dug from their prehistoric resting place.

“More exploratory expeditions are actually being planned and equipped at this moment than at any time in history; about fifty serious projects are under way.

“More money is being invested in exploration and geographical research this year than in any other ten years past.

“Somewhere around 500,000 columns of newspaper publicity a year in American newspapers are devoted to reporting the plans, work and results of scientific expeditions.

“Sale of books of exploration and adventure is higher now than it ever has been.

“Governing bodies, such as our Senate and State legislatures, practically never pass a session without serious mention or actual debate about some recent outstanding feat of exploration.

“Exploration is almost the only sure avenue of access to the hard-boiled business man and capitalist.

“Canada, Britain, France, Denmark, Norway, Russia, Italy, Japan and the United States are each underwriting scientific expeditions to be carried out officially under the flag of each country.

“Museums, universities, publishers, scientific foundations, business corporations and retired capitalists are almost daily begging the very limited rank and file of professional explorers to undertake new work in the various fields of exploration.”

When Byrd brings out an array of facts like that, it is hard not to agree with him that exploration is more alive today than it has ever been before in the history of man.

At this point he usually calls attention to the very interesting and little known fact that seven-eighths of the earth's surface has never been gazed upon by human eye.

The catch in this statement is that the surface he refers to is that portion of the globe which is covered by the oceans. It may seem strange for a flyer to be thinking about the bottom of the sea. But Byrd is more than a flyer. He is a great explorer in the sense that he is interested in every part of the earth, or even of the universe, that is still unknown to man. As he says, the bottom of the sea is the greatest single field left to explore. Its mountain peaks and plains, its jungles and dark ravines, its weird black depths where no ray of light ever penetrates, may yet divulge riches and secrets more thrilling than any ever found upon the dry continents.

We have spoken elsewhere about Byrd's interest in the Antarctic. He fully realizes that merely visiting the North and South Poles and looking down on them from the air is not the same as closely studying these wild and desolate areas.

The other day he said to me:

“The ends of the earth are still mostly a closed book to science. Hardy pioneers like Peary, Scott, Amundsen, Stefansson and Wilkins have penetrated the icy fastnesses of the Arctic and Antarctic. But we actually know very little of what resources in power and mineral, flora and fauna, are contained therein. Moreover, there are yet vast areas even to be superficially visited. In the Arctic there are 4,000,000 square miles of earth's surface never gazed upon by human eye! In the Antarctic closer to 5,000,000 square miles!”

Byrd's explorations are not commercial in the sense that by them he is seeking deposits of valuable minerals. But he realizes that it would be of great importance to discover some rare metal or mineral that would make our country richer and its people more prosperous.

I asked him one day whether he ever expected to find anything but ice in the Polar regions and a festering mass of tangled jungle in the tropics.

To which he replied:

“You might as well say that three generations of prospecting in our mountain regions made it impossible that we’d ever find any new deposits there. Yet one of the biggest gold strikes in history came only a few weeks ago. That shows how long men have to hunt sometimes before they find what they are after.”

As a matter of fact, Dick Byrd is absolutely correct in what he says. Right in the front yard of civilization have been made some of the greatest scientific finds of recent years. Roy Andrews astounded the world when he brought back petrified eggs of a million-year-old dinosaur. Douglas Burden made the fairy books come true when he captured two live dragons last fall in the shape of the hitherto unseen “Giant Lizard of Komodo.” Navy topographers found a whole lake of pure vaseline in northern Alaska. A recent American Museum expedition to Central America brought back living specimens of white Indians.

At this rate there is no telling what wild freak might not turn up in the prodigious spaces yet left to the daring traveler.

Since 1920 the population of the United States has increased about 13,000,000. This is equivalent to the total population of Canada. In Europe and Asia setbacks due to recent war are being offset by many conditions that are rapidly bringing the birthrate back to normal. When the United States reaches the 200,000,000 mark and other countries are correspondingly congested, new outlets for swarming humanity must be found.

This must bring a great and novel phase of exploration; the opening up of new areas on the earth’s surface ultimately capable of supporting human life.

Only about 6% of the globe is under direct control of civilization. Only about 4% of the United States is even considered arable. Some 1,200,000,000 acres of our own land are now unfit for agricultural development. Exploration of inaccessible and useless areas of this sort, charting and photographing of swamp and desert districts, are the first moves towards making them house and feed our excess population.

To be sure, such statistics make only an imaginary case out for further exploration. But it is quite easy to tie them up with actual conditions not far from our own shores.

It must be remembered that as civilization pushes out, there is a growing number of disputes over natural resources. Little known Labrador is a splendid example of this. For instance, from the Straits of Belle Isle North, the ownership of over 60,000 square miles of valuable forest, vast mineral deposits, and 3,500,000 horsepower in waterways has recently been involved in a lawsuit between Canada and Newfoundland over the possession thereof.

Once such an area has its development financed, a new kind of exploration must take place before the work can go forward. Modern engineering is highly competitive. Also labor and machinery are expensive. No capital, whether government or private, would dare begin hydro-electric exploitation of Labrador without very accurate estimates being made in advance of how much it is going to cost.

Another interesting point that Byrd has brought out is that vertically above the globe is a vast space about which little is known. I remember that not long ago Sir Alan Cobham spoke to me of an altitude of around 50,000 feet for the airplane in the very near future. This will make possible a speed of 500 to 1,000 miles an hour owing to the rarity of the air—if a plane can fly there at all.

There is a great deal of very practical scientific data to be obtained from a survey of the upper air. So far we have probed this stratum infrequently by sounding balloons carrying up recording instruments to a depth of above 50,000 feet. How important this investigation may be is indicated by the Navy Department's effort to work out a theory of Arctic air currents as the result of recent investigations in the far North. It is thought that these currents have a direct bearing on the weather which we experience in temperate altitudes.

It is doubtful whether study on the surface of the globe of meteorological conditions will ever give the final answer, namely: accurate prediction of weather far enough in advance to help mankind. It is to the aerial explorer that we must look for our results.

There is one thing that I am convinced of more and more as I talk to Byrd and see him working on his expeditions; and that is that exploring isn't what it used to be. The business side of it all is more burdensome than ever. The technical side requires years of education and training before profitable work can be done.

The explorer is now less a leader than an administrator. He buys his technicians. He succeeds by adroit finance. But he is still an explorer when

he gets out into the field. And that field seems still large enough to keep this fine breed of men engaged for another generation at least. Even then the strain must not be allowed to die out. For the explorer of tomorrow will delve not into the wilderness but into the mysteries of pure science, than which there is no work more profitable to mankind.

CHAPTER XVIII

SOUTHWARD HO!

JUST before Byrd took off from New York to fly to France, I had had lunch with him. He said:

“You know, Fitz, there is just one big thing left to do in the way of air exploration. That is to fly to the South Pole.”

“It’s big enough,” I agreed, “but it’s going to be pretty risky.”

“It’s all risky,” he smiled.

“But what is the point of it?”

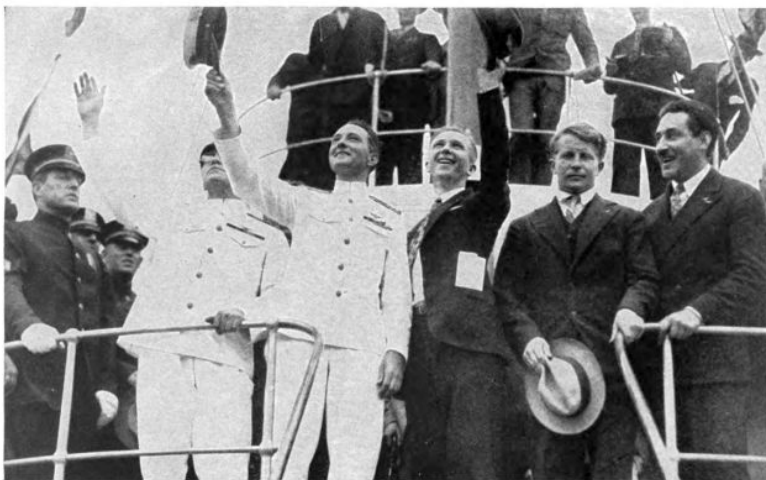
He shook his head. “The old story,” he said. “No point to it at all, when you think of making dollars and cents out of the South Pole. But we have got to keep on looking for more scientific knowledge so long as there are things about the world we do not understand.”



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IN CASE OF A CRASH.

Dick Byrd always carries a rubber boat on his long flights. It is rolled up in a small package and stowed under a seat in his plane.



© Wide World Photos.

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COMING UP NEW YORK HARBOR, JULY, 1927.

Watching the air maneuvers overhead. Left to right: Noville, Byrd, Chamberlin, Balchen, Acosta.

I have said before what I think about this idea. Men like Byrd keep plugging away at things they do not understand, that the world does not understand, and the world usually laughs at them. But here we are with automobiles and airplanes and electricity, and all because the Byrds of the past dug away after more and more information until the magnificent groundwork of science was complete enough to be put to commercial use.

Surely his flight to the South Pole is the most dangerous thing that Byrd will ever attempt. Had he crashed on the Polar Sea he would have been able to walk back to dry land. Up there he had a fair chance of shooting bear or seal or birds on his way south. When he reached land, he would have found caribou and musk-oxen ranging the hills behind which the Eskimos lived. None of these exist in the dead wilderness that surrounds the South Pole. No animals, no Eskimos; practically no dry land, save here and there a few narrow rocky strips that creep out from under the ice.

When Byrd flew to the North Pole, he was crossing an area that may very soon have a great significance in the military and commercial world. The North Pole lies between the great capitals of the northern hemisphere: London, Paris, Copenhagen and Christiania on one side; and Tokyo, Petrograd, Peking, San Francisco and Manila on the other side. The North Pole is surrounded by ice, to be sure; but on the edges of this ice are herds of

walrus and fur-bearing seals, are mountain ranges shot with precious minerals, and lands on which oil has been found.

In contrast, the Antarctic plateau lies surrounded by three great oceans. Like huge fingers pointing in derision at its uselessness are the southern extremities of the three continents, South America, Africa and Australia.

None of the incentives that Byrd had in crossing the North Pole is before him in his South Pole effort.

Greater peril and less profit is the fare that this splendid air explorer of ours has chosen for himself.

There are other curious points of comparison between the South Pole and the North Pole. The Polar Sea is a wide deep ocean, two thousand miles in diameter, completely filled with ice and surrounded with islands on which thousands of species of animals live. The South Pole, on the other hand, is at the summit of a huge plateau, rising from the shores of three oceans, the Atlantic, Indian and Pacific. This continent is more than a thousand miles in diameter. Like Greenland it is almost totally ice-covered. It is nearly inaccessible owing to the drifting ice pack that surrounds it. Its temperatures average far lower than those at the North Pole. The wind is much stronger than the average of the Polar Sea. It is the bleakest, wildest, coldest and in every way most dangerous portion of the earth's surface.

This continent was discovered by an American naval officer, Captain John Wilkes, U.S.N., on January 16, 1840. It is fitting, therefore, that another American naval officer, Commander Richard E. Byrd, U.S.N., should be the first to explore it from the air.

The reason Captain Wilkes made his discovery in January was, as you may remember, that when it is winter in the northern hemisphere it is summer in the southern. This is because the sun crosses the equator in September and is south all winter long, coming back again on March 21st. The warmest day in the year at the South Pole is December 22nd, that is to say, the day the sun is highest above the horizon; whereas it is June 22nd at the North Pole.

For this reason Byrd leaves New York in September. In that month we are just beginning to have autumn in the northern hemisphere but in South America every one is getting out their summer clothes and putting away their red flannels.

Byrd's route lies down to the southwest from California to Australia; thence to New Zealand, and on to the edge of the great Antarctic continent.

The reason he has picked this particular point on the South Polar ice cap to fly south from, is that it is the only point at all well known on that vast land. For nearly one hundred years mariners have been skirting it, sighting the ice cap here and there, just glimpses through the fog. But no one has dared drive a ship in save at the point where Byrd will land; that is in Ross Sea.

It is here that the British for many years made brave efforts to sledge to the Pole. They did not use dogs as Peary did. There were no Eskimos to drive the dogs and there were no walruses on which the dogs could feed. Scott and Shackleton tried ponies but the ponies could not stand the bitter blizzards and the driving snow which blew across the South Polar ice.

Byrd will take his ship as close as possible to the shore. His men and equipment will be carried in by small boats. He will build a sturdy winter house. He will set up work shops. Then he will assemble his planes and prepare to fly whenever the weather is good.

His job will not be just to fly across the Pole as it was when he left Spitzbergen. There is too much of interest on both sides of his Antarctic route. Think of it, an area of over four million square miles, much larger than our United States, is down there still unlooked upon by human eye!

There is no telling what Byrd may see from his plane. He may find new land; volcanos may spout smoke and flame as he passes over them. It is conceivable that some strange animals or birds or even human beings may be found in the center of that vast white desert.

From almost the same point, in 1912, Scott and Amundsen set forth with their sledge parties to reach the South Pole. Amundsen used dogs. He had lived with the Eskimos in the far north and was familiar with the handling of a long dog whip and the care of these strange animals. By great good luck his route took him up around the worst of an ice glacier that lies about halfway to the Pole. He met smooth going, fair weather, and reached the Pole on December 15, 1911.

At the same time not far to the westward, Scott and his men were dragging their sledges by slow stages up over the snow-covered ice. The energy that Amundsen was saving by using dogs, Scott and his men were using up in pulling the heavy sledges along. Also Scott crossed the worst part of the barrier glacier halfway to his goal.

Finally Scott's party reached the Pole. As they neared the center of the white plateau on which they walked, something black showed up ahead

through the frosty air. A kind of fear clutched at Scott's heart. All his life he had been dreaming of this day when he should stand at the southern apex of the earth and plant the British flag there in the name of his King and Queen. What could it be—that queer-looking dark lump out there in the white snow?

None spoke. The five men plodded ahead. Presently they reached the dark lump. It was a little tent left there just a few days before by the Norwegian party under the leadership of Amundsen. Scott was beaten. The terrible hardships he and his men had undergone, the biting cold and the blinding snow storms, proved too much for him. A few weeks later on their way home, all five of these brave men died. As Scott turned over in his little tent with the bodies of his comrades around him, he wrote the following imperishable words:

“ . . . For four days we have been unable to leave the tent—the gale howling about us. We are weak, writing is difficult; but for my own sake I do not regret this journey, which has shown that Englishmen can endure hardships, help one another, and meet death with as great a fortitude as ever in the past. We took risks, we knew we took them; things have come out against us, and therefore we have no cause for complaint, but bow to the will of Providence, determined still to do our best to the last. . . .”

Byrd knows intimately the history of all the South Pole failures. He realizes what other men have suffered and why they have died. He knows well that if he goes down in that lifeless land, he, too, may suffer and die. But he is prepared to take the risk. To help minimize this he is planning to lay out caches of supplies along his route. He hopes, if forced down, to be able to march back and find these food depots on the way. But here again, chances are against him. Snow may bury his food; blizzards may blind him to the trail; and possibly crevasses will cut off the retreat of himself and his fellow pilot.

The chances are that he will have to winter in the Antarctic. This means that he must have proper shelter and food for his men. Scurvy, dread of all explorers, must be guarded against. This is a disease that comes from not having enough fresh meat and vegetables. In the North it is prevented by the seal and other native meats which are always available. But in the Antarctic hunting is not easy; only a few birds and seals are found there. And if some seals are not killed in the early stages of the expedition, the party may find themselves without any but preserved foods throughout the long Polar night.

Then there is the problem of housing and repairing the planes. In cold temperatures any sort of mechanical work is much harder to do. Of course

the chief flying will take place in the milder months. But that will not eliminate the duty of housing and tending the planes throughout the year.

Amundsen had only his dogs to care for besides his men. He had had years of experience with these animals during his expedition through the Northwest Passage. Byrd will be handicapped by not having experienced dog drivers, or surely not more than one or two. Yet this may become an important phase of his expedition if he has to send out rescue parties or uses sledges to lay out caches of provisions.

A whole book could be written on the perils and problems of the antarctic, especially those which an air expedition will face down there. But it must suffice to say that a flight across the South Pole is by far the most dangerous and difficult project which Byrd or any other explorer has ever planned.

CHAPTER XIX

A DAY WITH BYRD AT HOME

THE other day I had the pleasure of spending a whole twenty-four hours with Dick Byrd. I had a chance to see what a man like him does with himself when he is not flying over one of the Poles, or off on some other exciting adventure.

“He is still sleeping,” the maid told me, when I came down to breakfast at eight o’clock.

At first this would seem to indicate a lazy man. In one sense Byrd is a lazy man. He doesn’t plunge into work nervously, grab at every job that is laid before him, and rush about and annoy other people. His inclination is to take things more easily and do the important jobs in systematic order.

“I think sleep is the most important thing a man can get for his health,” he told me. “I always try to sleep eight hours. Sometimes I try to add an extra hour when I know I am going to have a hard spell of work ahead.”

The great thing is that on occasion Byrd can get along with almost no sleep at all. On his Greenland trip he flew across Ellesmere Land three days in succession with an average of about three hours sleep on each day. He hopped off for the North Pole with only two hours’ sleep that evening. For many nights previous he had been averaging about five hours a night.

When he hopped off to cross the Atlantic last summer, he had gone to bed at 2 A.M. and got up at 4 A.M. Then he boarded his plane and flew for forty-two hours without break. It was not for four hours longer that he had a chance to sleep. In all, he was up seventy-two hours with only two hours in bed!

On the day I am describing, at about nine o’clock he came down for breakfast. He was carefully groomed, as he always is, with fresh linen and a suit that looked as if it had just come up from a tailor shop. He spoke pleasantly to the maid, to the dog, to one of the children, and to me. He glanced out of the window and with a sailor’s eye scanned the sky. He

peered at the thermometer fastened just outside the window. Then he sat down to breakfast.

His breakfast consisted of orange juice, hot cereal, two eggs and toast and tea. He has normal tastes. I think there is no kind of food that he does not like. He eats a thoroughly balanced diet. He eats heartily, but slowly.

I have noticed that he doesn't drink coffee. He has a cup of tea once a day. He thinks it inexcusable to pour stimulants into the body at all times. He believes in a moderate use of tea at home and in the field. It is a heart rather than a nerve stimulant.

He has told me that regular eating does not come naturally when he is not in the field. Perhaps in the rush of business, traveling over the country, banqueting and living a more or less abnormal life, he is inclined to eat too much rich food, or perhaps not eat enough. So he lays down a very definite régime so far as certain things are concerned. When he goes out to a banquet he eats soup, a little meat, one green vegetable and a little salad. He avoids rich sauces, sweets, and fancy dishes which he is not sure about. At home while he is eating he makes a point of giving attention to other things. He doesn't gobble his food with his eyes on his plate. Now and then his dog comes over and asks for a bite; or one of the children comes in and discusses plans for the day.

When breakfast is over, Byrd pushes back his chair and glances over the morning paper. It is characteristic of him that he likes to know what other people are doing. He is always profoundly interested in humanity.

Another thing, a man with his world-wide circle of acquaintances, is bound to see something about one of his friends in almost every news edition. He scans the latest political news. Byrd's contacts with Congress have been many and important. Some of his best friends are Senators or Representatives. It is both interesting and important that he know what they are doing.

Then there is the latest aviation news for him to read. He glances over the big flights that are under way, plans for development of aircraft, and any important discussions of aeronautics that may be going on.

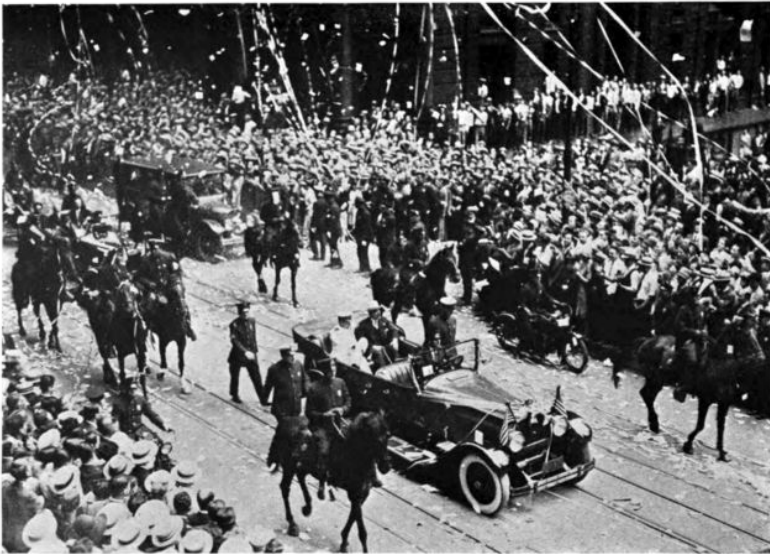
I think he always looks especially to see if any expeditions are being announced. To a man like Byrd the world is not an enormous place, the size of which can be grasped only by the academic mind. To him it is an interesting field, open to the sportsman and explorer. In his mind, the North

or South Pole, any ocean, and any desert or mountain range, are there waiting for the pilot to fly over them.

Study of the daily news gives Byrd a cue for some of his letters, for some points that he may want to make in his lectures, and not infrequently for a plan to help or improve some part of our national life.

Breakfast and morning paper take in all about forty-five minutes of his time. He then goes to his small office where his secretary has by this time arrived and has opened the morning mail.

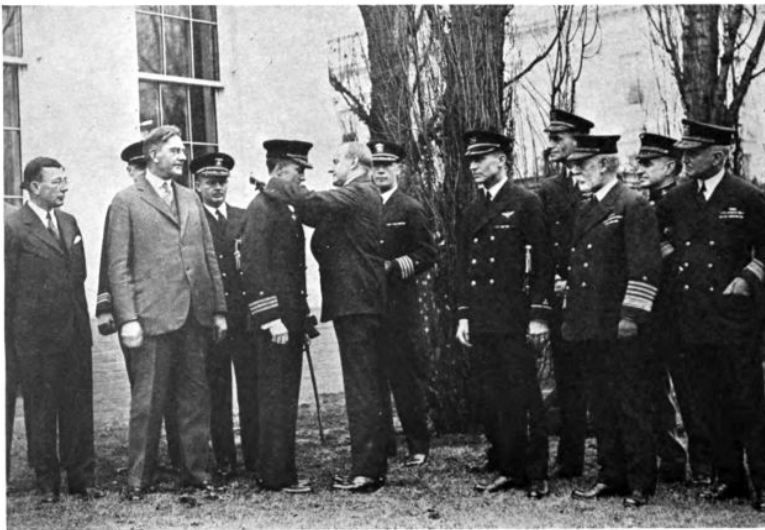
The mass of letters that comes to a man like Byrd is perfectly staggering. Several times I have had a chance to see, in a general way, what the postman brings him. I think from fifty to two hundred letters is about the average of his daily personal post.



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SECOND NEW YORK WELCOME—1927.

Dick Byrd is the only man in history to have two such homecomings.



PRESIDENT COOLIDGE DECORATES BYRD AND BENNETT.

Front row, left to right: Robinson, Assistant Secretary of the Navy; Wilbur, Secretary of the Navy; Commander Byrd; President Coolidge; Floyd Bennett; Admiral Eberle; Admiral Moffett

Byrd doesn't sit down and pick out the hard ones or the easy ones first. He is a methodical fellow. He sits down in front of the whole pile of letters and begins to go over them. On each he acts, swiftly, accurately, and completely.

I think a fair estimate of the contents of these letters would be something like this: 40 applications to go on his next expedition, 8 requests for speeches, 11 entreaties for help, 5 crank letters saying that aviation is no good, 4 mash notes, 20 requests for photographs, 6 requests for him to help out some charitable organization, and about 50 to 75 rambling letters not dealing with anything in particular.

The rapidity with which Byrd can dictate a letter is remarkable. I think the reason is that he has done a great deal of thinking in his life. He has his mind made up fairly definitely on a great many things of what he considers secondary importance. It is the matters of primary importance, such as progress of aviation, that cause him to pause and think before he dictates.

After an hour with his secretary, in which time he has taken care of several score of letters, he has an appointment to meet a caller.

This caller may be any one of a thousand different kinds of person, and have any one of ten thousand different kinds of ideas or axes to grind. Let me take a sample case:

The man comes in with a sheaf of papers and a roll of charts under his arm. He seems nervous. He greets Byrd effusively, and thanks him for letting him see him. As a matter of fact, the only reason he has been able to reach the explorer is because he has come with a letter of introduction from an old friend of Byrd's.

"Now, Commander," the caller begins, "I have a very special idea I want to put before you."

"Yes," says Byrd quietly. He cannot afford to get excited over every idea that is laid before him for the good reason that he would be worn out by the end of the month if he did.

"I think the chance has come," the caller says, "to fly over Mt. Everest. Mt. Everest is only about 30,000 feet high. We have an aeroplane that will fly 40,000 feet. There is no reason why we should not start right away."

"Why do you want to do it?" asks Byrd.

"I think it would be a fine thing to do. It would be very interesting to see what was on top of the mountain. Then the British have been trying it for a number of years. Also it is something that people would be interested to read about."

These are not very good reasons, but Byrd doesn't say anything.

"I think we might get started next June. What do you say about it?"

"How much is it going to cost?"

The caller looks a little embarrassed. "Oh, fifty or seventy-five thousand dollars."

"Have you got the money?"

"No, not exactly. But I thought if you spoke to special people they might give you some money."

Byrd smiles. He is used to being told that if he would only speak to some of his friends they would give money. They probably would if he spoke to them. But a man in Byrd's position cannot go around asking everybody to give money to any old proposition.

"I am afraid that I am not exactly in a position to do that," he gently tells the caller.

"Well, Commander, what would you suggest we do about it?"

This is the point at which Byrd is faced with the problem of getting rid of his caller or wasting some hours of valuable time on a thoroughly vague plan. With the utmost courtesy, and what appears to be a very genuine interest, he leans forward and says quietly:

"I tell you what you do, Mr. Thingumbob. Put your plan into writing. Make it only a page or two long. Then send it to me. I can sit down and study it and then tell you exactly what I think you ought to do. If you will be kind enough to do this I am sure we can get ahead."

Byrd then rises. The hint is obvious. The caller gathers up his papers, his roll of charts, and goes. Twenty valuable minutes have been lost.

It is necessary to keep the day's appointments down to a minimum. The way this is done is that the secretary collects all requests for appointments each day and Byrd goes over them. He decides whom he shall see and whom he had better not. Only in this way can he be fair to the important people who must get at him.

At noon comes the forenoon walk. This is a ritual. "Without a bit of fresh air before lunch I haven't got the appetite I should have," says Byrd. "Besides, I want to air out the cobwebs that fill my brain after all my mail and my conversations."

At least one or two dogs go, and usually young Dick Byrd, who is eight years old. If there is a house visitor he goes too. No business is mentioned on the walk. Conversation is usually on much lighter things, often humorous anecdotes of past expeditions, or reminiscences of some interesting person who has appeared in the day's news.

Byrd's home is beautifully situated on the Charles River Basin in Back Bay, Boston. He is right on the water. A step takes him to the long boulevard skirting the river. In this way he can get good fresh air, unpoisoned by smoke fumes from automobiles. As he strides along, various people speak to him. His face is well known. The policeman says "Good morning," and nods at Dick, Jr. Strangers stop and stare at him after he has passed. The children know him. Often strange dogs come up and sniff at him. A lover of dogs as he is, he is quick to make friends with dumb animals.

Lunch comes at one. This is not a hurried meal, but substantial both in time and in food. Chops and two vegetables with a sweet afterwards are

about the usual thing. At least one of the children is at the table, and there is plenty of talk to go with the food.

Byrd doesn't rush to his work immediately after eating. He may read a book or walk out on the veranda overlooking the river for fifteen or twenty minutes. This again is characteristic of the methodical and comfortable way in which he takes life.

When he sets to work now it is usually on some substantial task such as preparing a talk or lecture, or possibly an article or chapter in his book. He is very conscientious in the preparation of such talks. I have seen him take out a dozen reference books to make sure about one point. He feels that what he says is often listened to more than a speech of some other person; therefore he has a responsibility with his audience which he must live up to.

The same applies to his articles in magazines. There is a continual demand upon him for stories dealing not only with his adventures but with his views on all kinds of things. There is a constant demand for him to express what he thinks about the future of aviation. So many people believe that we are going to have a glorious development of aircraft in the next few years that they want Byrd to believe and speak the same way. But he feels that he must be conservative. He cannot fly off the handle and tell fairytales. It would be too easy for people to lose money, even lose their lives, if he insisted that certain things in aviation were safe.

In the afternoon he may have a delegation of people to meet who are anxious to engage his interest in some business proposition. He has many offers to go into business. It is a common thing for people to want him simply in an advisory capacity. His reputation for honesty and commonsense would make him a valuable addition to any board of directors or managing committee.

At five o'clock he takes his afternoon exercise. His favorite game in the winter time is squash. In summer he plays golf or tennis, swims or sails.

All his life Byrd has been a crank on exercise. He believes that happiness and success are normally tied up with a man's physical condition. No machine can expect to keep in perfect shape if one doesn't run it and keep it in repair. Sitting around and dictating letters, eating meals or giving lectures, is not running the human machine, he believes.

His walk before lunch is what he calls merely "an airing out." It is not strenuous enough to be considered real exercise, so he engages in some game in the afternoon that will really tax his muscles to their utmost. At this

time he tries to get in a good hour of exercise. He wants his heart and lungs to feel that sooner or later they are going to be called on for something strenuous. After his game he takes a swim. At Annapolis he was one of the best swimmers in his class.

Dinner is at 7.30 P.M. As he has eaten well for the other two meals of the day he does not have to stuff himself at this meal. He likes to have guests, if possible. He enjoys the company of other people, conversation, persiflage, and a general break from the routine of the day.

He doesn't like to work in the evening, but in recent years he has found it almost unavoidable. That is another reason he has to keep himself in such perfect condition.

His work after dinner may take one or two forms. He may continue with mail or dictation left over from the day. He may read proofs of a book or articles that he is writing. Or he may have to lecture. A good part of his time, as I have already said, is spent during the winter in traveling about the country telling the story of his adventures and incidentally preaching the benefits of aviation.

About 11 P.M. he has a glass of milk and relaxes. For an hour at least he reads or talks. He is in bed usually by midnight. If he is alone, or if the work is a little light, he tries to be in bed by ten, reading for half an hour before finally putting out the light.

With a strenuous régime like this at home, and an even more rigorous one in the field, Byrd is able to keep himself in perfect trim only by leading a moderate life in a normal way and keeping in an optimistic state of mind so far as possible. He weighs about 160 lbs. and is under 6 ft. tall. So he is inclined to be slender. He has the build of an athlete and is in condition at any time to set forth on a long flight or a long hike. Surely he is laying the foundation for a healthy old age.

CHAPTER XX

A DAY IN THE FIELD WITH COMMANDER BYRD

I have never spent a day in the field with Dick Byrd. But I have talked to so many men who have been with him on his expeditions, and talked so much to him about his expeditions, that I think I know pretty well what he does. So I propose to put together what will be a sample day in the life of Dick Byrd while he is off in the field, thousands of miles from civilization.

How different he is now from what he was at home. We find him in a colder climate. There is ice in the sea water, snow on the hills, and a frost dust in the air. The temperature is 20 below zero.

At 6 A.M. a Quartermaster comes and bangs on the door of the little cubicle where the Commander lives. Instantly there is a cheery "All right!" not the casual "What time is it?" one hears while he is at home.

There is a thud as his bare feet hit the floor. It has not been my privilege to peer behind the door on such an occasion, but I suspect that we do not always find Byrd at this moment in pajamas. I know that it is the practise among explorers while in the field often to "sleep raw." This means to sleep naked in the blankets. The rough fabric rubs one's skin and is a soothing and helpful influence during the night.

Throwing on a sweater, Byrd jumps out into the passageway. Probably the temperature here is twenty degrees above zero. Now for some exercise. He starts off by a standing run, then dips perhaps fifty times. Now three minutes of shadow boxing. In ten minutes his blood is racing through his veins.

Water is scarce in Arctic climates. One has not the privilege of a morning shower or tub. Once a week is the general allowance to the expedition. It takes much fuel to melt ice or snow for the water. Fuel is precious ten thousand miles away from home. In lieu of a bath, Byrd strips

and splashes cold water over himself. Then a good rub-down with a big rough towel.

After this getting-up process, which occupies in all about fifteen minutes, Byrd dresses now fully in his winter clothes. They consist of a warm suit of underwear, mostly woollen, to start with. Then woollen trousers and flannel shirt. Over the flannel shirt he puts a fur coat or shirt modeled after the Eskimo parka of the far north. Outside his trousers he draws on wind-proof trousers, unless he is going into the field. In this case he puts on short breeches of bearskin.

For footgear he slips on big rough boots lined with sheepskin, which he uses around the camp. They are not good for long walking as they are too clumsy. But they are good for plowing around in the snow and wind.

Every little point about Byrd's costume is worthy of notice. If the wind is blowing hard, he slips on wristlets of wool and knee-rings of fur to protect the big blood vessels. He ties the top of his boots to keep out snow. His mittens are probably lashed to his sleeves or fastened across his shoulders with a long tape, to prevent their being blown away.

He now goes out for a good look all around the camp. He is the kind of man that wants to start the day knowing just how everything stands. He glances at the fuel pile to see if last night's gale has swept away any of the drums. If any have been blown over, he glances at the bottoms of them to look for leaks.

From the fuel pile he moves over to the big shed protecting his plane. Here again he inspects for the evil effects of drifting snow or heavy wind. He knows by long experience that the time to catch trouble is when trouble starts. Once he lets the drift get away from him, it is only a question of a few days before fifteen or twenty feet of heavy white hard-packed snow has to be dug away to clear his belongings.

On his way about, he meets his Second-in-Command, who also is having a look.

"Hi, there!" says Byrd.

"Good morning, Commander. A little windy last night."

"You bet. How about that spare wing?"

Whereupon both go over to the lee side of the hut for a look at a large crate which carries a spare wing for one of the small planes. On the way they come upon a dog that has got loose in the night and is huddled half

frozen behind a box. Kindly Byrd picks the poor creature up and takes the trouble to carry him to the door of the hut. If the dog's foot is frozen, he may call to the surgeon to have a look at it.

At 7 A.M. comes breakfast. The slightly forced appetite which Byrd had at home, a little tea, an egg or two and two pieces of toast, now gives way to a hearty meal. He doesn't overeat, but he goes at his ration like a man earnestly trying to do his duty. This morning there are seal-steaks. The meat is fishy and the gravy is black. But Byrd wades in and has consumed three of the greasy morsels before he is finished telling one story of his last work in Greenland.

The other members of the expedition are in by this time. It is not Byrd's way to be an overstrict disciplinarian. His discipline is by implication rather than by direct instruction. If he finds a man eating little, coming late for meals, slack with his work, etc., he feels that the fellow is not up to normal. There is something wrong, possibly a touch of homesickness or indigestion. The normal man, Byrd figures, is as eager for his work each morning as he is for his breakfast.

The two staples that form the meal are seal meat and cereal. Every man has all the tea he wants to drink; though, like Byrd, they average only a cup or two apiece.

Byrd doesn't hurry his men through the meal. There is a burst of song down the passageway and some of the gang are heard whistling while getting on their mittens and boots. But there is a feeling of anticipation in the air as Byrd inquires of one man or another what he is going to do about this and that.

"Have you counted the cases in that pile of dog biscuit?" he asks.

"No, Commander. We've been working on the supplies for Station Six. You know the plane leaves tomorrow."

"All right. Let's do both. Get them done today."

The words are abrupt and the tone is curt, but Byrd's smile disarms the suspicion that he is in any way peeved.

It is not yet eight o'clock. But work begins full swing. It is curious how much work there is—far more than enough to go around. But there is a reason for this. The station is thousands of miles from the nearest repair shop, supply shop, or other means of equipping or helping the expedition. The little group of twenty men or so must be their own means of transportation, supply, repair, communication, and all else that goes into

making up our every day life. The leaders or heads of departments in the work press Byrd for help.



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GETTING READY FOR THE SOUTH POLE.

Training some of the 100 dogs Byrd will take south with him. A forced landing on the great South Polar ice cap will mean disaster unless there are dogs for rescue.



THE WHITE BARRIER OF THE ANTARCTIC.

Note the small black figures of two men at the foot of the ice wall near the left.

Says the radio man:

“Commander, that new armature for my motor weighs over 800 lbs. I have got to have some fellow help me lift it.”

“I should think so,” says Byrd.

“Can he come now?”

Byrd turns to his Second-in-Command: “How about sending in two men from the plane shed?”

The Second shakes his head.

“Sorry, but all that crowd are down at the ice foot rescuing the oil drums which slipped off the hill yesterday. You know the wind started them. It takes five men to handle each drum.”

Byrd is faced with the dilemma which every leader faces sooner or later. Shall he help the radio man or the man in charge of fuel? It is Byrd’s way to help both of them.

“All right,” he says briskly. “We’ll do both and we’ll do them right away.”

He turns to the radio man:

“You and your help come down to the ice foot with us.”

To his Second he adds: “Well make it an all hands job.”

Five minutes later twelve men are down slipping around on the ice, staggering about in the cold wind and shouldering up the steep incline big metal drums containing the precious fuel. To the occasional eye it is impossible to discover which is Byrd and which is the ordinary seaman. Like the others, he has his shoulder against a drum, panting and groaning and helping to finish the job.

When the drums are back in place, half the party is told off to go to the radio shack. There Byrd once more takes a hand and works shoulder to shoulder with his men. As the armature is lifted into place, his face becomes smeared with grease, his hands grimed with graphite and his knuckles skinned.

This does not mean Byrd lacks executive ability. When it is necessary to have others do the work, when it is better for him to retain full leadership and only give orders, he senses the advantage of doing just this.

Possibly at this moment in rushes a flustered sailor. He touches a finger to his cap.

“Commander, I think that radio mast is going to go. She’s tilted ten degrees at least. The northwest guy is already carried away. If she falls we smash the last set of insulators!”

At this moment it will not do for Byrd to rush out and put his shoulder to the wheel. Swiftly he sizes up the situation. He knows he has twenty-six men in all. Seizing his Second-in-Command by the shoulder, he orders him to take the radio gang to the west guy. To the chief engineer he gives a sharp word to hurry to the ice foot for the ice tools. Three more men are sent to bring up the spare coil of cable. Inside of two minutes a complete plan of action is in effect to save the radio mast. Each group of men is under a leader. Each leader knows exactly what he will do. Byrd then busies himself going around from group to group making sure that some of the heavy jobs are not undermanned, and that some of the most delicate jobs have competent men to supervise them.

At noon comes a “mug-up.” Not a meal, for there are only two real meals a day. This mug-up is usually tea and sandwiches. The smokers light their pipes. For half an hour there is a comfortable breathing space in the hut. Byrd foregathers in his stateroom or cubical with one of his section leaders. There is a special problem to be worked out that afternoon. Perhaps the radio mast has only been partially stayed. The meteorologist reports a storm under way. The barometer is falling. Gusts of wind and a smother of snow are sweeping down from the ice nearby. Exactly at 1 P.M. Byrd goes back to where his men are gathered. It seems a shame to disturb them. How comfortable and peaceful they look, sprawled about, talking and laughing. Yet at his approach a sort of impalpable stiffening runs through them. It is as if they knew that an order were coming.

“Well, fellows,” Byrd says, “we’ve got a dirty job this afternoon. Guess it will last into the night, too.”

“That’s me!” says someone.

Byrd turns around to the cook.

“Cookie,” he says, “we want a good feed tonight. We’ve got a lot of work this afternoon. Plenty of wind and the temperature going down. Fix us up a roast, can you?”

“I’ll do it, Sir,” says the cook, knowing that to feed twenty-three hungry men means about forty-eight dinners.

“Attaboy!” shouts one of the men.

Byrd calls his Second aside:

“Guess you’ve got to carry the load this afternoon, old man,” he says. “That cache party are not back yet. Maybe they are in trouble. It has been snowing ever since they were out.”

The Second looks closely at Byrd.

“You mean you are going out with the dogs?”

“Yes. They ought to be within fifty miles now. We can make it by tomorrow night.”

The Second shakes his head. He knows that there is no stopping Byrd. The little party that has been laying down food depots for use by the planes later may be in trouble. It is Byrd’s responsibility to get them out. As is always his practise in case of life or death, he takes the leadership.

By one o’clock the two tasks are under way. One man is going with Byrd. He hitches up eleven dogs to a sledge. The load is lashed down to the deck of the sledge. Besides pemmican and gasoline for the little private stove there are two sleeping bags, a bag of grass for the boots, and a bag of spare foot gear. Snowshoes are lashed atop the load.

Drift swirls around the sledge as the job goes on. The dogs lie huddled at the end of their tracks. It is no weakling’s task to go out into this half-blizzard hunting for a trail. But there may be starving men at the end of the day.

A shout from the driver—a wave of farewell from Byrd, and the party is off into the flying scud.

Something in Byrd’s bent shoulders as he plunges into the wind, something in the gay wave of his arm, now animates the men left behind.

The work they have to do is to dig holes and place “dead men” for the new guys to hold up the radio mast. It is hard work. First ice, then frozen gravel, and finally hard granite. The heavy coils of cable must be rolled out. The top must be lowered, lashings have to be made, and bolts fastened, all in the bitterly low temperature. About every twenty minutes the Second-in-Command calls a halt while the men warm up. Half way through the afternoon he orders all hands inside for a mug-up of tea. By six o’clock the job is done. Strong men as they are, the party is almost exhausted. A cheery word comes from the galley.

“It’s a big roast, boys, and enough for seconds all around.”

Just as the men are sitting down, comes a shout from outside. Byrd is back. With him the missing party. There are some great stories to tell. The

faces of the men are streaked with frost-bite, black smears where the flesh has been touched in the bitter wind.

The meal now becomes a banquet, celebrating the return. As a surprise the cook produces a big cake that he has baked. There is a candle on it.

“What for?” several ask.

“Solomon Gundy’s birthday,” says the cook, speaking of an old sea tradition. “You should have duff, but no such civilized stuff in these elegant days.”

Towards the end of the meal Byrd slips off to his room. He has noticed silence at one corner of the table. Two men seem glum. He remembers there has been a small misunderstanding. He sends word for one of them to come in.

The aggrieved man tells his story.

“So you see, Commander, it was not my fault. I have been trying to do what I could to make things right.”

Byrd is worn by his day’s work and his twenty-mile hike on the ice. But he must face calmly and cheerfully this trouble. Isolation and hardship magnify differences that would mean nothing at home. He says:

“Let’s get the other fellow in and lay our cards on the table. What do you say?”

After a moment the man says, “All right, Sir, if you think that’s the thing to do.”

Twenty minutes later the three have it out. Byrd is referee. Not a fight, but a cool coming to terms that ends in stronger friendship than ever.

In comes the Doctor on the heels of the two who have just left. “I have an idea,” he says. “The bacteriology of men on our diet has never been satisfactorily investigated.”

He goes on painting to Byrd a technical picture of an experiment that will require two hours of that evening. He brings forward charts of blood tests and uses high-priced words that even Byrd doesn’t understand. He is eager, ambitious and altogether professional.

Byrd’s impulse is to say, “Oh, pshaw! That’s not important compared with keeping our health and doing our job.” But he knows that the scientific man looks on his work as big as the sledge man looks on the ice cap. So he says, quietly, “I think you are right, Doc. Let’s go to it.”

The evening passes busily. First a trouble, then experiment, then plans for the morrow, then charts to go over, and food-lists to check. And finally near midnight Byrd gets to his diary which is the history of what he is doing. And he's doing a lot, all right. That's Byrd's way.

CHAPTER XXI

THE WAY BYRD THINKS

IT is always interesting to get into the mind of a man like Byrd. He is dealing with the big and fascinating things of life. He has a chance, through his contacts with many men and many enterprises, through his successful voyages and expeditions, to get a better idea of the whole of modern existence than the average man has.

I think, as I have said before, that Byrd is conservative. He does not feel that it is fair to give out exaggerated ideas. I don't believe he really has them. He hitches his own wagon to a star and his plans for his expeditions set no limits, but when it comes down to brass tacks and he is asked to speculate about the present or the future, he is very careful what he says.

Byrd is a great student of the value of aviation to the civilized world today. He feels that we haven't gone far in aviation yet, but that we are going fast. He tells me we have about 2000 privately owned airplanes in the country today, or about the same number as there were of motor cars in 1900. Yet by 1926 the number of motor vehicles in the United States totaled 22,001,393. So if private flying comes in the next year or two we may look for nearly the same sort of increase in airplanes.

In the last two years Byrd and other pioneers have made great steps forward. One is, they have shown that a gas engine can be counted on for many hours of performance in the air. We knew some time ago that we could mount it in a test shed and run it without stopping for two days. But with the polar, European and Hawaiian flights behind us now we know that a pilot can at last depend on his engine in all sorts of weather for from thirty to sixty hours unbroken running.

Byrd feels that such long distance flights show how important it is to have more than one engine in a plane. When he was flying across the North Pole or across the Atlantic, one of his engines could have gone out of commission suddenly but he could have flown on the other two. As about eighty percent of airplane accidents are due to engine trouble, he feels that

safety in flying is tremendously tied up with having this extra factor of safety in at least one additional engine.

He believes that there will be a considerable reduction of landing speed in the near future. Our big planes today have to keep going from fifty to seventy miles an hour to keep from crashing. Landing at such high rates of speed is dangerous for the amateur flier. If we can build planes that will land at a speed of about thirty miles an hour, such as the original Wright plane did, it would be much safer for the pilot.

One thing of great interest to Byrd is the making of airplane models by boys. He thinks that in this way some of the most important changes and inventions in airplane design will develop. Also, the boy soon learns just what it is that causes his plane to stay aloft and to stay evenly balanced in the air. As a result, when the boy later learns to fly, he has a natural feeling about his plane which he would not have otherwise.

Another matter of interest to Byrd is the progress of gliders. By this is meant airplanes without engines.

When the war ended, Germany was by treaty with the Allies not allowed to build aircraft. But she had permission to do what she wanted with aircraft wings and bodies. So the Germans specialized in the manufacture of what are known as gliders, or airplanes without engines.

Now Germany is the foremost nation in the world in the development of gliders. Schools all over the country have contests to see which boy can build the best glider. These are entered in a national contest in which big prizes are given for the most successful machines.

The world record for a glider is now held by a German. He stayed aloft over fourteen hours without any engine. After he was catapulted off the side of a hill, he steered his glider into ascending currents of air and by keeping his position just as a bird would, was able to work back and forth over the summit of the hill all day long.

The greatest distance ever attained by a glider without an engine is forty miles. This was made in a most interesting fashion. One day, during a gliding contest, a big cloud came up over the horizon. As the sun disappeared and it grew darker, one by one the gliders descended, all but one. The pilot of this one thought he would find out what would happen if he glided up into the cloud. So he did this. The minute he got into the cloud he found himself drawn to a higher altitude. He mounted four thousand feet. He then came out into clear air.

With this great altitude he was able to see for miles across country. Having found out what a cloud would do for him, he headed for another cloud some distance away. When he entered it, once more he was carried higher. With the altitude thus gained he glided to still another cloud. In this fashion, working from cloud to cloud, he traveled forty miles in less than half an hour!

Byrd feels that probably the greatest obstacle to successful transatlantic flights in the immediate future is our lack of knowledge of weather conditions over the ocean. He says:

“When we were ready to hop off in May, 1927, the first regular ocean weather maps for the upper atmosphere were issued by Dr. Kimball of the New York office of the United States weather service. Most persons will remember how bad conditions were during the periods immediately prior to our hop off. The trouble was that just when one zone of the ocean route would be reported clear of fog and storm another zone would be very bad. Had we been able to get reports over a larger area, or had our plane boasted of a longer cruising radius, we might have dodged the rough spots and hopped off much sooner. In order to prove the reliability of aircraft we did not await ideal weather.”

Byrd does not believe that transatlantic air service with planes is coming within the next few years. There are too many hazards. Our largest planes would soon sink or be smashed to pieces if they were forced down out of sight of land. Even with radio it is difficult to tell exactly where a plane is. An emergency comes so suddenly in the air that it would be impossible to be sure that any nearby ship were warned of her trouble before the plane struck the ocean.

Byrd believes that it is possible that some day we shall have anchored landing fields in the middle of the ocean.

“But that day is far off,” he says. “From a practical point of view, such landing fields would seem to be almost an impossibility. The power of the sea is so great that it would soon tear down the most rugged structures.”

I asked him about the possibility of a fleet of lighter-than-air dirigibles traveling back and forth between London and New York. “I suppose,” he said, “that will ultimately come. But just now I doubt very much whether such craft will pay their own way.”

He went on to remind me that the earth or the sea will carry any load. All you have to do is have a cargo ship or freight train and put an engine in

them. The sea and earth do the rest. But with an airship, much of the cost of construction must go into what holds up the load—the gas bags. The air doesn't help. With a plane it is the engine that must not only pull the load ahead, but also keep it up.

Byrd feels that we still do not realize how close we are to widely owned private planes. Yet he does not advise everybody to jump into using a plane without proper training. He thinks that accidents hurt aviation far more than successful flights help it.

"But," he points out, "universities are beginning to teach flying to our young men and young women all over the country. Private flying schools are turning out pilots by the hundreds. Some public garages are setting up repair and inspection facilities for the private plane owner. The United States Government is providing special weather data for the private flier."

Mr. Ford is backing Byrd on the coming South Pole trip. One reason Mr. Ford wants to do this is because the Ford company will ultimately build small planes suitable for you and me to have in our garages just as we now may have a Ford car.

Already a good plane can be bought for six thousand dollars. When planes are turned out on a quantity basis as cars are now, their cost will come down to below one thousand dollars.

There will be other advances that we do not clearly foresee. For instance, Byrd says:

"For several years gasoline will be the fuel, if only because of our national surplus. However, I am inclined to think that the days of gasoline are numbered. Alcohol and crude oil are bound to be used for the private plane in a few years.

"Introduction of a plane into the private owner's garage will introduce a lot of brand new problems into the same owner's household.

"I cannot conceive of widespread private flying without progress in parachute jumping. Long jaunts into the country or over rough areas without landing places should not be attempted without parachutes. Yet I feel sure that older people will not take readily to this rather upsetting business of jumping out at two to ten thousand feet above the earth. Wherefore the chief gainers by the private plane may be our sons and daughters who will grow up learning to use 'chutes as naturally as they now use their bicycles."

Another interesting side line in flying is that of sports. Byrd says: "Sports are being developed that are applicable to the privately owned plane.

One is the game of 'bomb dropping,' in which soft missiles are dropped on a big target with colored rings for scoring by the same system used in archery. Another game consists of planes flying in pairs with light joining ribbons between each pair. When the ribbon breaks that pair is 'out.' ”

Men who work with Byrd have long held him in especial affection because of his determination to look out for the interests of those who help him succeed. He has had few chances to speak about the men who repair his engines and keep them in shape. Of course he himself always gives a final inspection to his plane and its equipment. But he realizes that he must have mechanics upon whom he can rely if he is going to trust his life to the engine that carries his plane into the air.

He has spoken feelingly to me about Floyd Bennett who went with him to the Pole. He thinks Bennett was one of the greatest experts in the care of airplane motors in the world.

Then there is "Doc" Kincade, motor expert of the Wright Aeronautical Corporation. He says of Kincade: "It is a sad commentary on modern society that this man of all flying men, is known to his friends as modest, retiring, reliable, intelligent, untiring, tenacious and talented. Yet should receive none of the terrific flood of adulation poured upon other fliers who have in a sense been mere passengers and chauffeurs."

Byrd has had much to do with the establishment of the air-cooled engine. This engine was developed by the United States Navy and by the Wright Company. Byrd has used it in several of his flights, notably his North Pole flight in 1926. Then, in a striking way, he established the advantage of the air-cooled motor over a motor cooled by circulating water. Many accidents had occurred in which the feed line for the cooling system had been clogged, causing the engine to overheat and the pilot to make a forced landing—often disastrous.

Byrd's opinion of a perfect airplane motor is that it must have a sound design to start with. He insists always that adjustment and inspection be made over and over again until he and those upon whom he depends are absolutely sure that the engine will keep running for as long as fuel is poured into it. Or until it actually wears out.

Besides his views on planes and engines, Byrd's ideas on picking his men to go on dangerous expeditions are very interesting.

When it becomes known through the newspapers that he is going off to the North Pole or the South Pole, at once thousands of applications to go

along come in. It seems as if every one of the twenty million boys and girls between eight and eighteen, in the country, want to have the same adventure. Girls, too, mind you; for they like the thrill of dangers almost as much as the boys do.

One morning I threw a lot of questions at Dick about this business of picking men. How do you decide which ones to take? How about the man who smokes? The athlete? The fat man? The thin man?

He shook his head. "It's a tough job, I tell you," he said, "and the worst of it is that so many men who seem just what I want at home, probably wouldn't work out when I get into the field.

"I think that when I consider a man for danger or hardship, I put the fact of danger first. A good many men can face hardship if only they make up their mind to it. But facing danger and keeping one's head is the kind of self-control that comes from long habit.

"In our transatlantic flight last summer my men had to give highly concentrated attention to important duties during twenty-two hours in which we saw neither land nor sea. All knew well that trouble with our engines or with our instrument board might plunge us to death in thirty seconds. Yet all worked accurately and without cessation throughout the flight. A peculiar indifference to continued danger made such efficiency possible.

"It is interesting that in getting down to cases, I would say that the average man does not get his full strength until after twenty. He reaches his peak around twenty-five and is close to the downhill side—physically, I mean—before he is thirty-eight.

"Of course there is enormous variation among individuals. I have yet to find the doctor who will give me a satisfactory answer to endurance. They can tell me if a man is sound, how strong he is, and what the likelihood is of his breaking down under any specific load. But they can't tell me how long his nerves and muscles will last under strain.

"I know a lad of twenty-two who is splendidly set up and has a perfect health record. But he cannot stand long muscular strain. In contrast there is the case of that great Alaska missionary Arch-deacon Stuck, who at the age of sixty, I think, did forty-five miles a day over a tough trail at about fifty below zero and worse."

One could go on indefinitely reporting conversations with Byrd. He always seems to have something new and interesting to say. Truly his is the mind of the explorer, as well as the heart and soul.

THE END

TRANSCRIBER NOTES

Misspelled words and printer errors have been corrected. Where multiple spellings occur, majority use has been employed.

Punctuation has been maintained except where obvious printer errors occur.

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[The end of *Dick Byrd—Air Explorer* by Fitzhugh Green]