



First trip 19  
in single  
motor mail ship '33.

"a swell pilot."

19 Mountains peaks rising  
out of the fog - look like  
small islands. "I love it!!"

Ray 13312. July 27<sup>th</sup>/34

19 Bare, barren. - St

Seattle. Ralph J. Vindem Pilot

6:00 P.M. Evelyn Jones mate

From Portland

19 left for Chi. 7:30 A.M.

Howard M. Hey Pilot

No. 13313.

19 "Stewardess" Margaret Salt

209 N.E. Brazee

Portland, Ore.

19 Emil J. Smith

Mate 6957 N. Vancouver

Portland Oregon

9 Pilot James W. Belding (Salt Lake)

Mate Robert J. Arson

Stewardess Lida Quinck

9 left Cheyenne for

Omaha at 2:00 p.m.

19 William K. Calligan Jr

young Dale  
Mrs. Ethel Young Dale  
1200 W 57th St Seattle 1-1

13349  
13333

"Ethel Young Dale"

T.E. Hutterberg (Vancouver B.C. Trip)  
S.V. Jones (a Stormy Trip) 3m.

Joe R. Smith

Lobby Wurgast R. N. 916 - 1st  
alameda hall

Carl Schuler - C-Pilot

H. Miller - Pilot. on Smith America -  
13355 - now 1

Oliver M. Hamilton, R.N. 1651 Fruitvale Ave  
Oakland

(Dumrey) Palmer June 29-1935 Pilot - Oakland  
over

Frank Erickson

P. Varga 1.28.35 - 1108 Laurel St. Oakland

Paul Anderson 999 Lee Ave San Leandro

H. Jones - U.S. L. Seattle. Ship 13351

Portland. Gladys Putnam - 1915 N.E. Clackamas Oregon

Emil J. Smith 187 Fremont Ct. Port

Frank E. Hutterberg - Seattle, Wn.

(absent)

1954 - 15<sup>th</sup> no.

Calif.



19 Herwardus - Ida Chopin  
6202 So. Hwy - St.  
Chicago - Ill -

19 Frank R. Page (book up into ch)  
Not United Air Lines  
Cheyenne - Wyo

Clyde Tangleam  
First Trip South - in motor Ralph B. Vanden June 28<sup>th</sup> - 1932  
Got to ready Dec 14 1935

Trip 2 - and Frank W. Anderson Don's favorite Pilot  
DECEASED  
Julie L. Richards 61-A Pacific Ave Ala.

133-8 Chapman & Joyce built this time Seattle Wash.  
Feb. 2, 1936 Heber C. Miller Seattle - Oakland

13334 Gladys Putnam Portland - Feb 2, 1936  
Frank E. Hattinburg Portland Seattle  
Al Shelly Portland - Seattle

Billy McFarlane  
1939

Frank Hendrickson -  
5307 - Bond St. Oakland, Cal

L. Leap - N. ATLANTIC  
A. Foster 133-67 - "Ship" July 10<sup>th</sup> / 36  
Oliver Hamilton "once again" Oakland Airport  
Wichup Oak 7-10-36 DECEASED  
(FBI) IS 140035

Reinholda Doherty R.N. Oakland 7-10-36  
Ed Dunbar PACIFIC Seattle 7/26/36  
Ed Burger Medford Ore 7-26-36  
Ship 13301

Evel Anderson 627 Lincoln - Alameda - Cal  
"The Mainliner" Heading South Aug 19<sup>th</sup> 1937 8:00 A.M.  
NE 16687

(we flying - 4 motor wing ships 1 Pa)  
May we have many more ships  
together 241  
L. J. Jones

Myra French 527<sup>B</sup> Central Ave. Alameda, Calif  
from Oakland to L. A. - -

Al. Gilhouse  
110 West Carroll  
Jace B. Matron 1814 Central Ave., Alameda, Calif



Sept. 1<sup>st</sup>, 1937. (Name) 16074 "Mainliner"  
 Mike Garghelmetti "Captain"  
 Tom Merrill  
 Ladie Ericson - Stewardess

Perk air at 10000' - 35°F Sept 1<sup>st</sup>

W. B. Stead "Capt"  
 J. M. Roberts "1<sup>st</sup> off." 9-1-37

Patricia Anderson Trip 1-16-38  
 which you'd start commencing to Q. & to  
 that have done so since and all more good  
 Nat Henson Trip 8-16 - 8-16-38

Watch out for Andy she takes awful line.  
 E. Stattenberg \*Capt. trip 1-16<sup>th</sup>  
 Floyd Jones 1<sup>st</sup> off.

Genea Weisenburger - trip 8-16  
 E. S. Remelin Capt - Trip 8/16 Oak - L.A.  
 Mike Garghelmetti Trip 1-31  
 E. L. Brain 1<sup>st</sup> off.

Conan Thomson - trip 1-31-38. - Wish I  
 could go with you now but probably will  
 see you again - Los Angeles. Oakland.

W. B. Stead 8-31-38  
 J. M. Roberts 8-31-38

Verda West - Stewardess - Capt W. R. Caraven  
 8-31-38  
 Capt A. Gilhousen  
 8/31/38 LOCKHEED  
 AIRMAN'S WORLD

Capt. G. W. Zimmerman #5631 3-26-46  
 1<sup>st</sup> off. W. E. Popham #563 3-26-46



Minors - United over  
 air lines! Nov. 23/40

E. P. Schwan Capt. Trip 20 10/12/41  
 H. Baile - 1<sup>st</sup> Off trip 20-12-41  
 E. Miller - Stewardess - Trip 20 10/12/41



Capt Joe R Smith 8-18-39  
 1st Officer Ruth H. Schustrom 8-18-39  
 Happy landings, always!  
 Olive Hamilton

} Seattle to Sacramento

Capt. E. Hamilton Lee 8-31-39  
 1st Officer Verne A. M. Lennert 8-31-39  
 Stewardess: Miss William Kinkaid - 1401 Jones St., S.F. Calif.

Capt. R.E. Coulter 8-31-39  
 1st Officer C. F. Bruce 8-31-39  
 Stewardess - Ethelwynne Mathews 8-31-39  
 Capt. H.V. Laughlin  
 1st Off. E. L. Teneske  
 Jack'Brien  
 Patricia Dempsey

TRIP #19 on 9-2-39

2618  
 76th - Oakland

Capt Groen 29 Jan  
 1st Officer Ruth H. Schustrom  
 NEW. Eddie Ericson

Capt. W.A. Hamann  
 1st Off J.M. Tallman  
 NEW Sally Fountain

Portland to Seattle 4-27-40  
 1st Off

Oct 28th 1940 by Capt Groen 1st Officer C.N.

10-29-40  
 Leslie A. Neil  
 Dick H. Van  
 Capt. Groen  
 J.A. Johnston  
 M. Larry

# AIRMAN'S WORLD

(PACIFIC)  
 A BOOK ABOUT FLYING  
 1st Off. P. Z. Brett 8-26-47

BY  
 PETER SUPP

TRANSLATED BY  
 CYRUS BROOKS

Vancouver - B.C. 7/26/41  
 Trip 35  
 Capt. Guy Cairn  
 1st Off. K. R. Langford  
 1st Off. K. J. Trumbley R.N.

Thomas W. Davis  
 Capt. W.A.L.  
 1st Off. J.A. Jones 7-27-41 - ATLANTIC  
 1st Off. RAY Thorpe - PD -  
 R. K. Buckle Res. Captain PD  
 F.A. Berg 1st Officer PD  
 Myra Balf Stewds. - PD. 711 N. Randall

NEW YORK  
 WILLIAM MORROW & COMPANY  
 MCMXXXIII

First trip on "Brenda" the "glamorous" airplane - Trip 30 - 10-27-40 -  
 Stewardess B Ashbridge  
 # 303 - 2521 Central Ave., Alameda



Capt. Manning

(S. to Y. B.S.)

A Translation of Das Neue  
Welterlebnis, 1932.

C. Y. - B.N. G. - Canadian Seaplane.  
Renaud L. class. Vancouver B.C. to  
Victoria B.C. Aug 3<sup>rd</sup>/41

Trip 39 Burbank - Oakland 9/5/41

S. D. Baird

U.S.

J.M. Telleman

Stewards - Ruthie Cuthbert

"

Southern Food House

E. J. Smith - Seattle Vancouver 1/24/42

V. H. McVey 1st off Vancouver 1/24/42

Printed in Great Britain by

HEADLEY BROTHERS

109 Kingsway, London, W.C.2; and Ashford, Kent

Airman's World, unsked Term of flt.  
American Airlines lost & found dept  
Sept 15 - Oct 22, 47

Bob Luns

Eddie Le Tenke Res. Capt.  
Denny Jaisplac in  
your affectionate admiration.

Killed in INDIA Dom Herndon 1st Officer

12-18-41

Trip 45 SA-V

12/19/41

THIS book is not intended as an addition  
to the already large number of works on  
the history of flying, the development of  
the aeroplane and the lives of great air-  
men. It is neither a text-book nor a  
history-book; its aim is to give some  
impression of the airman's world, of its  
beauty, majesty, and strangeness.

R. K. Buckle Res. Captain

F. A. Berg First Officer

United Trip 6 from Vancouver B.C. to Seattle

Mae Armstrong Stewardess

Capt. J. Alan Smith

First Off. John B. Wilson

United Trip 39 - Oakland to Seattle  
Sept. 5, 1941

Capt. R. E. Coulter

First Officer Edw. R. Crooks - S. America

Stewards - Myra French

Trip 17 - Portland to Seattle

10-12-41

Capt. Bob West UAL Seattle 11/8/50 and  
11/11/50

First off. Joe Small

Magg Brown - Stew -



Ship 6  
1-7-54

PETER SUPP.

Mary Mc Donigle - Stevardess SF-LA  
3/21/42

CONTENTS *Helena Jeanne St. Martin-Stewardess*

## BETWEEN EARTH AND STARS

## THE ATTAINED AND THE ATTAINABLE

## THE MYSTERY OF SPEED

## THE DREAM OF FLIGHT

FLIGHT SENSE AND SPACE SENSE

THE AIR AS A HUMAN EXPERIENCE

## THE DOMAIN OF SKY

SEAS OF AIR

## CLOUD EMPIRE

## FOG—THE ENEMY

## THUNDERSTORMS

## WONDERS OF THE AIR

## The Double Sun

## Artificial Clouds

## The Mysterious Ring

## The Circular Rainbow

## Fata Morgana

## THE PLAY OF SHADOW

Trip 55, 9-3-43

M. H. Hedden, Captain  
G. Edwards, First Officer

Virginia Judd - Stewardsess

T		13
ND STARS		13
O THE ATTAINABLE		14
SPEED		17
IGHT		25
SPACE SENSE		28
MAN EXPERIENCE		31
Y		39
AIR		39
in		46
S		60
S Ring		65
Rainbow		68
ow		69
		70
		70
		72
		75
		76



Trip 7/24/44

Captain Emory Culbertson  
First Officer Lee Hall  
Stewardess Doris Burnside  
Daddy Thomey 3/26/46

## THE AIRMAN AND ANIMALS

191

## MAN DISCOVERS MAN

203

Always well to see you  
and have my spirits lifted.  
Mayday - 43 Eddie Le Penck

a familiar face, Trip 78 May 2, 1942

July 4<sup>th</sup>, 43 Rose Cleary  
" El Dunbar 1st Officer

" L. B. O'Dell 1st Officer

10-10-50

629 VFL

Russ Powell  
Bruce Tobin  
E. T. Osterling

Vancouver B.C. Aug - 21<sup>st</sup> of Dec. 41

May - PMA Capt. J. Williams HKB-TYO 12/13/42

8-16-43 E. Le Penck - WISH I COULD  
GO DOWN TO THE COAST WITH YOU!

## LIST OF ILLUSTRATIONS

	PAGE		PAGE
Over Athens	11	Shadow of Zeppelin	82
Above a wide expanse	12	Tilled fields	85
Modern city	21	Village	86
Ancient city	22	1. Ornamental gardens at Schleissheim	87
Terraced city	23	2. Waterworks at Grosslappen, Bavaria	87
Palace gardens	24	Racing track	88
City by the sea	33	Boats on lake	95
City by night	34	Beer garden	96
City under snow	35	Park	97
City from a height	36	Lonely house	98
Clouds rising from a stratum of mist	41	Cordilleras	103
Piles of cumulus cloud	42	Junction of mountains and plain	104
Föhn	51	Glacier	105
Föhn clouds	52	Mountain chains in mist	106
1. Cloud mountains	57	Mountains in cloud	111
2. Cumulus clouds bent by the wind	57	Mountain lake	112
Clouds and the sea	58	Snowy peak	113
Tower in fog	63	Cloud-capped peak	114
Town in fog	64	Crater	119
Lightning by night	73	Edge of crater	120
Receding thunderstorm	74	Peninsula	121
Sun reflection	79	Landscape with lakes	122
1. Artificial cloud	80	Ornaments of the sea	127
2. Rainbow-coloured ring round the shadow of an aeroplane	80	Sailing-ship at sea	128
Shadow of aeroplane	81	Wakes of destroyers eluding an attack	129

Dylan Harper Capt N.W.A. 2-2-44  
Paul Thrush First Officer - N.W.A.  
Selia Garvey R.N. Stewardess N.W.A. 2-2-44



Capt. W.R. Craven - 672 Mar. 9, 1951  
 First Officer J. H. Stangor - 672, 3-9-51  
 F/E W. H. DUREANT - 672, 3-9-51

X LIST OF ILLUSTRATIONS			
	PAGE		PAGE
A disappearing island	130	In the wake of the storm	170
Milky way of drifting ice-floes	133	Siberian swamps	173
Iceberg	134	Canals	174
Village under snow	135	Harbour	175
Mountain road blocked by snow	136	Ships in harbour	176
Vista of snowy peaks	139	Jerusalem	179
Glacier and frozen swamps	140	Baptismal pool in the Jordan	180
Fjord in sunshine	141	Rocky desert	181
Glacier and drift ice	142	Hills of Judæa	182
Sandy desert	151	Southern part of Gerasa	187
Dying oasis	152	Northern part of Gerasa	188
Salt desert	153	Flamingoes in flight	189
1. Limestone peaks	154	Grazing camels	190
2. Edge of the desert		Wildebeest in flight	195
1. Wooded country and lake	157	Elephants swimming	196
2. River and railway bridge near Fribourg, Switzerland		1. Camel-caravan in the desert	205
Coastal fort	158	2. Dog-sleighs in the eternal snows of the Southern Arctic	
Native village	159	Bullfight	206
City on the edge of the desert	160	Open-air meeting	211
Pyramid	163	Bathing beach	212
Waterfall	164	Football match	213
River	165	Balloons	214
Winding river	166	Market	219
Delta	167	Procession	220
Silted river bed	168	Worshippers	221
Floods	169	At the fair	222

Earl W Hale NWA 2-6-44 <sup>500</sup>  
 Virgil Hanson NWA 2-6-44 <sup>500</sup>  
 June Hoss R.N. N.W.A. Stewardess  
 Flight 3-2-6-44  
 R.E. Hiesner U.A.K. 556 3-27-46 <sup>11R</sup>  
 Am. Wright - First Officer  
 Merle Lissou - Stewardess



Over Athens  
 In the background the hill of Lycabettus with the monastery of St. George  
 Photo: Flugkapitän Brauer

Capt. J. H. Stangor  
 First Officer C.R. Brauer  
 Flight Engineer E. H. Stangor  
 Stewardess - Mary Amy Brauer  
 Barbara Ann Mitchell  
 Los Angeles, Calif.  
 Trip # 672-15-51-47X-SEA.  
 673-28 Bill Rand  
 Capt. Seattle  
 1st Off. Seattle





Above a wide expanse  
Photo: Junkers

at Sand Bay.



"Chester", Navy flier

"Captain Joe Smith".  
"a fine Pilot"

Captain Bob Conner  
Western Airfield  
Best Records

Hank Tombling

1/6 Hank & Barr  
1-5-59

THE AGE OF FLIGHT



### BETWEEN EARTH AND STARS

WHEN flying through blue depths of sky with the earth spread out below me, just high enough to distinguish men and vehicles as smaller and larger dots upon the roads, I have often dreamed of some eternal being, dwelling in one of the stars, looking down, as I do, upon the earth, but with acuter sight, observing it like an astronomer, seeing upon its surface precisely what I can see from my machine.

And I have imagined the strange things this star-dweller would have seen within the compass of my own life—a mere moment in the forward march of the centuries.

From year to year, in many parts of the world, the great irregular patches which we call cities would have encroached more and more upon the green fields. Denser clouds of smoke by day, redder gleams of fire by night, would have veiled or illumined these great teeming spots, giving them the appearance of vast cauldrons. Year by year more roads and railways would have thrown their network across certain countries, while other lands, greater in extent, would have shown no sign of movement, as though sunk in everlasting sleep. And upon the roads, rivers and oceans of the world, dots would have appeared, more and more numerous, larger and larger, swifter and swifter.

Garlands and chains of light would have shone by night across these awakened lands, growing ever brighter. And of these lights some would have moved steadily through the darkness, as though mankind had lost all peace, forgotten how to find rest, and were spending its sleepless nights in carnivals of light.

Nov 3, 1950 Flight 674 Seattle Portland  
Joe Spinkston Capt  
Robt & Bowman 1st Off  
Arnie Breder Fld. Engr.  
Jean Goodnight Stewardess  
Quik Dean - Stewardess

673-20  
11/29/50  
Bill Reed Capt - Seattle  
W. Peterson 1st Off - Seattle  
H. Croft Flight Engineer Seattle  
Guthrie Capt - Seattle  
11/29/50



What thoughts would he have, this star-dweller of mine, at sight of these changes on our native earth?

He might ask himself whether a new migration of the peoples had begun, whether men were gathering in mighty camps of war, preparing to fall upon the sluggard lands?

He could not guess the thoughts of human minds, but this much would stand beyond doubt—mankind is in haste and yearns for light.

And as he pondered—that starry creature of mine—on the reasons for man's haste and man's yearning, his observant eye would be surprised by a new phenomenon, stranger than all the rest, entirely new, whose first beginnings he had overlooked, perhaps because of their very strangeness.

But now he would see distinctly: dots of a form never observed before, elliptical, dracontine, rise up from the earth, soar towards the sky, pursue their course and return to earth again.

Whither is man tending? Is it his will to leave the earth, aspiring towards the sun? Is this the goal of his feverish haste, his urgent desire for light?

Whither is he tending? Can he answer that question?

And where is life bearing him?

#### THE ATTAINED AND THE ATTAINABLE

Regarded from the earth's surface, these happenings are less mysterious. The people down below, scarcely visible from the height of my aeroplane, walking firmly on solid ground, are not greatly concerned with the destiny of their species. They see what has been achieved and move forward towards greater achievement.

But men of later ages—like that imaginary being on a distant star—when they come to ponder the changes that have taken place on the globe, will see in our acquisition of the power to leave the ground and move freely in space an event of unique and decisive significance, the beginning of a new epoch in the

history of humanity—the age of flight—which constitutes a definite break with all that has gone before.

Everything man has ever done before, every happening, human or non-human, that has taken place in the six thousand years of man's history, has taken place upon the earth's surface.

The migrations of races have led us through plains, valleys and forests. Our great battles have been fought on the earth's fields. (Mother Earth has held her children firmly in her hands.) They have wept with sorrow and laughed with joy, pressing their faces in the folds of her ample garment. Man has lived upon a horizontal plane, apart from a few mountain tribes, a few shepherds, his life has been bounded by two dimensions. Height and depth were obstacles which he evaded or bridged.

Now man has conquered the vertical plane. The third dimension, (height), has given his life a new direction. His science, his technical accomplishments have opened to him the trackless spaces of the sky.

The most open of all things, the space above his head, was most completely closed to him.

Is not the discovery of a new sphere of life, and one of such vast dimensions, a matter in itself of unique importance?

And a second fact is related to it, not less novel and not less significant for the life of man—this sphere is unrestricted.

It is free of all those hindrances with which we are confronted upon the earth, the forests, swamps, gorges, mountains, rivers, seas and deserts. What effort has been expended, what hardship has been endured, in overcoming only a small part of these obstacles!

Unrestricted but not unlimited, though this was often overlooked in the ardour of those first days of discovery. For it has its natural boundaries, the crust of the earth beneath and the layer of air above, within which we must remain in order to breathe. This upper boundary is reached at a height of thirty-two thousand feet, but even at lesser heights respiration becomes difficult. At twenty-three thousand feet it is impossible



to read or write properly; at this height a man's writing becomes like the scribblings of a child.

What a small distance is thirty-two thousand feet! A good runner can cover it in little more than an hour. Our Mother Earth forbids her children to stray far from her bosom; she keeps them always within breathing-space.

Man soars into this space by applying his knowledge that gases lighter than air, enclosed in envelopes of close-woven stuffs or casings of light metal, have an upward lift. He glides through the air or allows himself to be borne by the currents that flow through it, trusting the buoyancy of the atmosphere to hold up the broad wings of his machine. He propels himself through space by means of motors, which thrust the air away from before the propellers of his airship or aeroplane, and thus rushes as it were through a temporary vacuum.

Balloon, airship, glider, aeroplane and seaplane—these are the vehicles of the new epoch.

And yet all this is not enough.

Enclosed in air-tight vessels, equipped with respiratory appliances, man rises beyond the natural frontiers, high into space beyond the limits of the atmosphere, where the stratosphere begins. Here all is calmer; no more clouds or mist, no storms, no earthly weather; the upward draughts that rise from the earth are transformed into horizontal air-currents which flow steadily round the globe from west to east.

Here begins in truth the aerial sea that surrounds the earth. Growing ever richer in hydrogen, it merges eventually, how far away we cannot tell, into that mysterious, frigid ocean of aether that fills the universe, traversed at inconceivable speed by the rays of sun and star.

If we looked down, from the altitude of that aetherial ocean, upon the restless, storm-tossed, wind-riven atmosphere around our earth, it would seem to us no more than the breaking surf on the coasts of our terrestrial island.

But man's will goes out beyond these breakers into the open sea.

## THE MYSTERY OF SPEED

One need be no dweller in the stars to realize that the speed of human movement grows ever greater. We have exceeded the speed of animals, water and wind. Those who mistrust the miraculous frequently state that there is nothing new under the sun. But this is not true. Man has never moved so swiftly before, nor has he ever illumined the darkness of earth with so much light.

Flying through the night, with the winking stars above me, I have often been charmed and astonished by the lights glimmering and flashing below, sometimes from the blazing cauldrons of great cities, sometimes from tiny wayside railway stations.

It is as though the earth retained a reflection of the starry skies.

Brighter! Swifter! Magic words, which some invisible watchman calls to the human species! (Light is the symbol of greatest wisdom and comprehension, of the completion of happiness.) And, apart from light, nothing stirs our hearts more surely than movement.

Observe a little child. What can please its eye more than a lighted candle on a Christmas tree? What can amuse it more than a flapping pennon, a bouncing ball, a rocking-horse, a toy on wheels? How it crows when we give it a ride on our knee or swing it into the air! It always wants to move quicker, quicker!

What is our pleasure in sleight of hand but delight in the astonishing speed of the conjurer's movements? When we dance, we enjoy the temperate intoxication of another person's movement. Our sense of joy verges on ecstasy when our feet fly swiftly over a smooth sheet of ice, or when we rush downwards on skis or in a sleigh towards the valley, rounding the sudden curves of a snowy track, or when we drive a car at top speed down a straight road, with the trees flashing past us like bursts of smoke.

We love speed for its own sake.

1559  
N.E. 2. # 740  
Lee McMaster  
Deloria Brown



18  
W  
breath  
flashes  
primit  
of the  
not be  
that n  
V  
move

up of new "memorable  
of (happy). I don't feel the  
of "happy". I don't feel the  
I don't feel the  
I don't feel the

Photostat  
of  
Deed Book

is a pleasure to meet someone who regards flying as  
 something more than a means of transportation. T.W.A.  
 10/2/62 Edw. Mary Kearney

Sten. Margarete Schmitt M.W. A  
10-12-65 F.T. 16

## THE MYSTERY OF SPEED

19

If a man took off at sunrise in these latitudes, where the circumference of the earth is fifteen thousand miles, and travelled westward at a speed of about six hundred and thirty miles an hour, the sun would always occupy the same spot on the horizon behind him during the twenty-four hours of his circumaviation of the globe. For one whole day the sun would appear to stand still. If his speed were still greater, he would twice see the sun rise on the same day.

Such things still seem almost incredible, but in the near future we shall attain such speeds. We shall not rest till we have done so. Then how much nearer, in terms of time, will be the capitals of Europe.

Man has made of the aeroplane the most dangerous weapon of all times, and should it ever have such a pacific effect, it would be purely accidental. Speed, the never resting, is essentially opposed to peace; it drives, torments, goads us forward. Whither? To what end?

You may think the answer to this question a simple one—rapidity of transport. Does not the true value of flying lie in the unequalled rapidity with which goods and passengers can be carried from place to place? For many this is its only object. They believe that the significance of flight begins and ends with speed. For such people a book on the airman's world would begin and end with speed. It would be the fastest book ever written.

If you asked them why they set such store by rapid transit, they would hardly understand you ; for them, the answer would seem to be self-evident : to save time.





Capt. George R. Smith N.W.A. Flight 31 11-4-63  
 Pilot - Lytle Skraff N.W.A. Flight 31 11-4-63  
 Second Officer - Royce D. Mudd ALTITUDE 39,000 TEMP -87°F

20

# THE AGE OF FLIGHT

But where is the time they save? They should possess an enormous credit balance. Yet I never met a man who could draw upon it. No one ever has time to spare. It is no exaggeration to say that the quicker we become in our movements the less time we have. And that is strange.

Does not our speed seem to have some mysterious object of its own?

I hope I shall not be misunderstood. Of course the speed of air-transit has a great value. It is the basis of all commercial flying. Its advantage is so manifest that it needs no demonstration. If you are in a hurry to get somewhere, you think at once of an aeroplane, for it will carry you most rapidly to your destination. For the time at least, the whole significance of flying is speed.

But if this were the whole point of flying, there would be little more to say about it as a human experience, and hereabouts my book would come to an end.

I am not speaking, however, of the objects of air-transport. I am asking a question which may sound strange in this age of haste: Why are we in such a hurry? I am asking what are the deeper causes of our ardent desire for speed.

The more I consider the nature of speed, the more mysterious I find it.

Whence comes the joyous intoxication it calls forth? Whence the foolhardy contempt for death with which men serve it? What numbers have sacrificed their lives for it! Yet others can always be found to take risks as great and greater. Whence the outbursts of enthusiasm which such deeds arouse? Strange as it may sound, I can compare the ultimate effects of speed only with religious ecstasy.

It is only by entirely forgetting the human element and thinking of the atomic bases of life, from which modern science has partially lifted the veil, that one can guess at its secret.

The ancient dualism of matter and force seems to recede farther and farther. The concepts of mass and energy on which our contemporary knowledge of nature is built up seem to



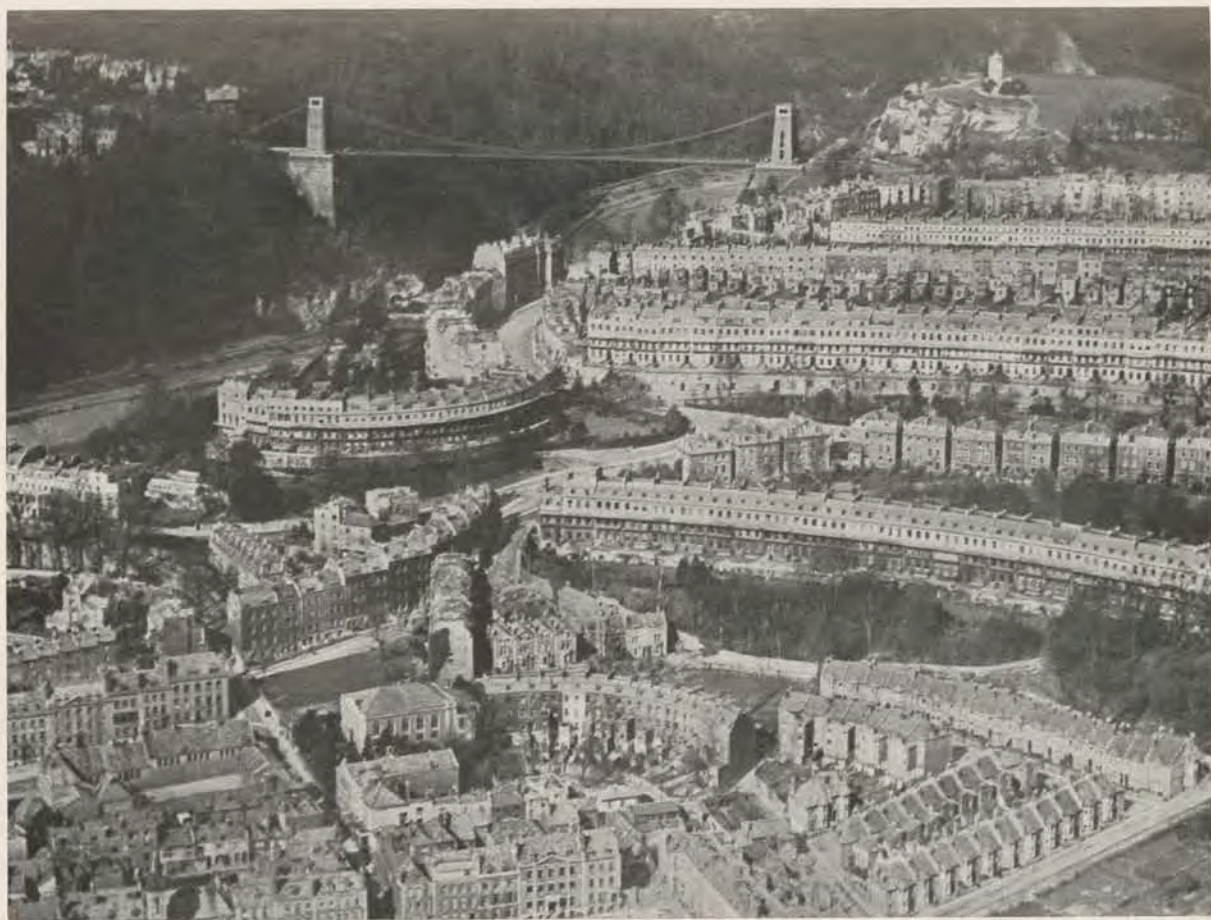
Modern city  
 The skyscrapers of Manhattan, New York  
 Photo: Kutschuk

Mary Twissler - stew - Feb 31 - 11-4-63 - ORD-SEA  
 Anne Bone - stew - Feb 31 - 11-4-63 - ORD-SEA  
 Helen - stew - Feb 31 - 11-4-63 - ORD-SEA  
 Anne Twissler - stew - Feb 31 - 11-4-63 - ORD-SEA



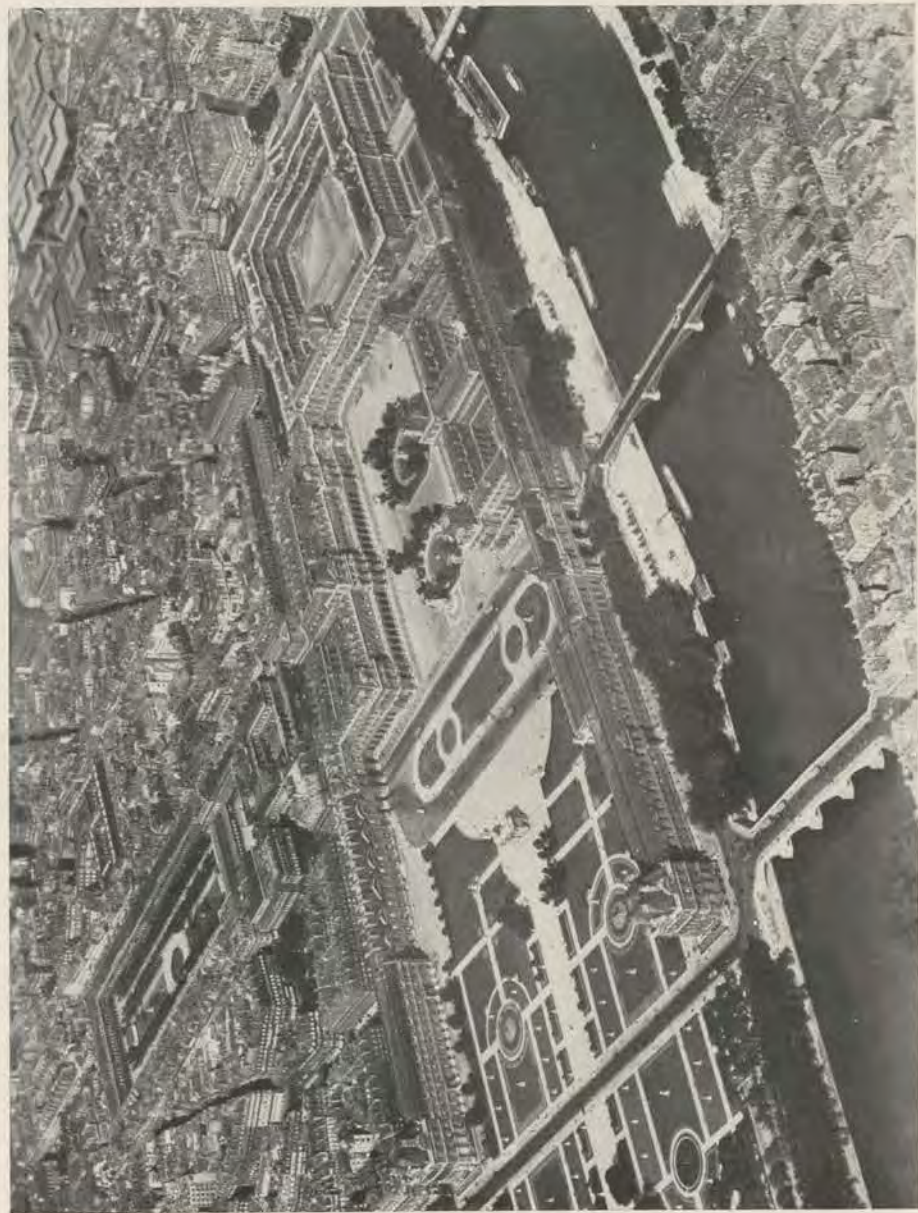


Ancient city  
Nuremberg, with the castle, the round Vestner Tower, the Heiden Tower and the Luginsland  
Photo: Photogrammetrie



Terraced city  
Bristol, with the Clifton Suspension Bridge; above the terraces, the observatory  
Photo: Aerofilms Ltd.





Palace gardens  
The Palais du Louvre, Paris, with the Place du Carrusel and the Palais Royal  
Photo: Compagnie Aérienne Française

resemble each other to the point of identity, for the mass of a particle of matter differs from its energy only by a general ratio which equals the square of the speed of light. Every particle of matter is subject to a principle of motion which makes it the centre of energy-waves, and these, in obedience to the general law of wave-motion, are subject to mechanical laws.

In this conception mass becomes dependent on velocity, whose highest limit is regarded as the speed of waves of light.

I must leave the reader to discover from scientific works the detailed processes which have led to this hypothesis. But I think I am justified in using the results of science in my attempt to understand life and its phenomena. Of what use would science be if it did not serve this purpose?

Thus this conception suddenly displays the infinite, inward mobility of the world of matter. Every atom is full of restrained vibration, inhibited haste, ready at any moment to set itself in motion. And so I dare suppose that all our impulse towards movement, all mankind's mysterious longing for speed, can be interpreted as his atomic being transformed into aspiration, metamorphosed into feeling.

Speaking metaphorically, the sources of energy imprisoned and materialized in concrete form are trying to become fluid, to stream back to the mighty aetherial ocean whence they came. Each intensification of speed would therefore be attended by the intoxicating sense of more rapid movement towards the sea of light.

The longing for ultimate speed would be the (longing for light.)  
Man scents from far away the aetherial ocean. His haste is a haste towards the light.

#### THE DREAM OF FLIGHT

The young age of flight is awake to its very finger-tips. It has done with dreaming.

The spell of reality is so powerful that dreams are soon forgotten. The actual existence of the aeroplane has driven the



dreams of flight from our recollection. We say they have been realized, but we have already forgotten what they were.

Or were they concerned with punctual transit through the air? Does our modern air-traffic satisfy those century-old yearnings for flight?

Practical utility has obscured the variety and extent of that ancient aspiration.

We must cast our minds far back if we would realize afresh its original force. We must recall the great myths of the past, in which the dream of flight found its first and purest expression.

Man felt the vast space above him as intimately connected with his personal fate. It separated him from cosmic powers, and he felt that all life, including his own, was dependent upon them. His childlike fancy gave them form. How could he lay his petitions and entreaties before the far-off gods? How could he pour his prayers into their ears, beg them to have pity on him, to lead him back into their realm of eternal light, from which he had been cast out like a child from its home? How could he do all this, unless he had wings to bear him upward, unless there were winged messengers of the gods who could descend and uplift him?

To the imagination of primitive man flight was a means of conquering space, a means of getting nearer to God.

Man longed to be free of the fetters of space and time, to return to the universal and eternal.

The longing for flight is the deepest form of human nostalgia. It is firmly rooted in the desire to be free.

In the great religious myths the yearning for flight is a yearning of the soul for infinite freedom—liberation from the yoke of the body, release from its burdensome weight, escape from sorrow, union with the All, which seemed to be divine.

In the legends of a later and more civilized age, this yearning changes and grows fainter; it becomes simply a desire for greater freedom from the limitations imposed by the body.

These legends express the wish to perform miraculous deeds, to undergo unique experiences, to hover above the earth in a

magic cloak which renders its wearer invisible, to float upon the streams of air, to attain the uttermost delights of love, to look down upon beautiful and remote countries, to see beyond distance and through obstacles, to transport oneself wherever fancy calls, surprising one's foes and playing merry pranks. The unearthliness of these legends is very earthly. But the essential impulse is still the same: (the longing for freedom.)

Nowhere does the dream of flight attain such ardour as where man is in thralldom, a slave, a prisoner, or a captive in the chains of love.

We shall never find this freedom in an aeroplane, but the flying-machine has realized a part of our legendary dreams. We can speed through the blue air of heaven, look down upon the various faces of the world, surprise our foes, move with a vastly increased velocity, and travel through the skies unseen by human eye. Are these not miracles enough?

Modern air-transit has transformed so many of our dreams into concrete reality that we have forgotten their legendary origin. We cannot yet foresee the practical results of aviation for the life of nations and individuals.

But the utilitarian value of this new means of transport, which provides us with a new and astonishing weapon of war, has made us forget the sweet, rich dreams of the past, when flight was a way of seeing the unseen, of experiencing the un-experienced, when flight was desired for flight's sake.

We are further than ever from the deeper significance of man's craving for flight. "The aeroplane has freed our bodies from the earth and borne them aloft, but our minds and spirits are still in fetters."

Speed seems all a matter of the senses; we do not feel its supersensory quality; we do not feel the allegory in the steel and canvas of our flight-machines.

Our deeper craving to fly is still unsatisfied.

Therefore the dream of flight is not yet ended and never will be, so long as man or woman still longs for unfettered freedom. For the goal of flight is the infinite.



Man aspires to his eternal home. His dream is a dream of God.

#### FLIGHT SENSE AND SPACE SENSE

In their desire to extol the new age of flight, to praise it as the complete fulfilment of our aspirations, its partisans go a little too far.

When travelling in an aeroplane, do we taste all the joys of flight? Do we know a fraction of the rapture that is ours when we hover in our dreams over roofs and crowds and tree-tops? Does air-transit really provide us with the joy we experience in dreams?

If we are sincere, we must, I think, admit that it does not. A voyage in a great passenger-plane or in a rigid airship is very much like a voyage in an ocean liner through a sea that is tranquil or slightly rough. A flight in a small sports plane is like a trip in a motor-boat when a moderate or heavy sea is running.

The balloon gives a more definite sense of floating through the air, the glider of skimming along on its currents. That is why balloons and gliders will always find an enthusiastic following; they yield, far more than airships or aeroplanes, a feeling of complete freedom.

But none of the vehicles of the air can give us the delight we feel in dreams, the sense of unrestricted freedom to fly where we will.

Exaggeration can only lead to disappointment.

The cause of flight is not served by excessive and emotional claims. Its practical value, the fresh channels of experience it opens to us, are rich enough in themselves.

The smooth, high speed of an aeroplane produces a unique sensation, a greater sense of lightness and freedom than one experiences in a racing car, even when the car is moving only half as fast as the plane, for when flying one has no proximate

stationary objects by which to judge one's speed and is therefore not liable to nervousness.

Who can have felt the wheels of an aeroplane leave the ground or the floats of a seaplane rise above the water without a thrilling sense of liberation?

Yes, this aspect of our longing for flight has been amply and finally fulfilled: we can leave the earth and travel through the air. This achievement is still so close that we feel a debt of gratitude to all those who worked and sacrificed themselves for it.

But when people say that in an aeroplane they are no longer conscious of the force of gravity and have a delightful sense of being released from it, their remarks must not be taken too literally. One is just as conscious of gravity in the upholstered seat of an aeroplane as in a club-armchair; we weigh just as much on the floor of a plane as we do on the ground. Flying has delivered us from the bonds of space only in a symbolic sense.

There are two moments in flying when our physical sense of existence in space becomes acute—first, when the aeroplane rises abruptly from the ground and, secondly, when it makes a quick turn at a height. In rising we feel a tickling sensation, a little, sharp shock in the pit of the stomach, such as is caused by the sudden upward movement of a lift or of a child's swing. When the plane banks and turns it produces a giddiness, a loss of equilibrium and a sense of pressure in the ears.

We are equipped with organs of sensory perception which make us aware of changes in our bodily position. They seem to have their seat near the solar plexus for perceiving alterations of vertical position and in the involutions of the ear for horizontal changes. Even in the highest air-strata these organs do not permit us to lose the sense of our physical position with reference to the earth below.

We easily forget that the expression "flying-man" is still a metaphor. We have invented machines and appliances which enable us to move through the air, but we ourselves are as far from "flying" as we were a thousand years ago.



The same feeling of giddiness comes over us in the movements of a rapid dance. We become confused, our balance is disturbed, but we find it enjoyable and surrender to it with a sort of ecstasy. In dancing we drug our perceptions of surrounding space and thus become temporarily less aware that we are imprisoned within the body. The wild dances of religious sects set out unconsciously to achieve the same effect. The rapid movement leads to physical ecstasy and thus heightens the ecstatic frame of mind. The profound relation subsisting between the two is thus made manifest. Both forms provide a channel through which the forces of the ego, fettered and imprisoned within the body, seek an outlet towards ultimate freedom, in the one case externally by the intensification of physical powers, in the other internally, by the over-exertion of mental powers.

Side by side with the airman's bodily sense of space is a mental sense of space, which is of a quite different order. In the great solitude and emptiness of the heavens, the infinity of space is impressed far more profoundly upon his mind. Space is all about him. He is himself a minute heavenly body and in him cosmic feelings are awakened. He feels a new independence of the earth, and this greatly changes his relation to it. But these are mental processes.

When flying, a man experiences the universe. He feels himself nearer God.

I have found no more beautiful expression of this, the airman's sense of cosmic oneness, or, to use a religious expression, his feeling of nearness to God, than in the last lines of a poem written by a French flying-officer a few hours before he died. It was given to me by a friend. The author, Captain de Beauchamp, flew over Germany on the 17th November, 1916, and bombarded Munich—though one can hardly use such a term of the little projectiles he threw down, for they harmed no one. Flying on, he escaped to Italy. A month later he was wounded in fighting a German pilot, his machine crashed and he was killed. The poem is entitled: "To my Death in the Air."

He speaks of conflict, danger, forced landings, and ends with these words:

*"But you, my soul, are dedicate to flight,  
And know the skyey path that leads towards day.  
Quickly can God uplift you to His light,  
He need but bend His hand a little way."*

### THE AIR AS A HUMAN EXPERIENCE

We all live so much under the spell laid on us by utility that we find it very hard to contemplate a thing for its own sake. To many people flying means nothing more than a method of rapid transit. They have decided long ago that aeroplanes and airships are a new but commonplace means of getting about, and they see nothing unusual in them except the fact that they carry men and goods more rapidly than was ever possible before.

But do we never take ship except to reach the other side of the sea? Do we never long to hear the surge of the waves, to feel the salt wind in our faces, to see the spray flashing in the sunshine, the changing colours of the water, the contours of strange coasts, of isles and hills in the blue far-away mist? Do we never feel an urge to defy the storm, to take part in the comradeship of danger, to enjoy and experience our voyagings upon the sea?

"Flying, too, we must love for its own sake."

How comes it that the greatest miracle of our time, the one thing that marks it out from all other times, should have been subdued so quickly to the purposes of pure utility? What have we made of the magic carpet that bore us aloft in our dreams?—A weapon and a conveyance.

Many different reasons have combined to make the air-machine an effective weapon. They are too obvious to be worth enumerating. But its value as a conveyance depends on one quality alone—its speed. Almost the only persons who use aeroplanes to-day are those who are in a hurry, those who travel

*The words - at bottom of a great picture  
as seen in the war memorial in Edinburgh  
Scotland - up in the Edinburgh castle - dedicated to the  
R.A.F. fliers - "I have borne you on eagle wings  
and brought you unto myself!"*



for business and not for the sheer joy of travelling. One could almost say that speed has become more to us than the enjoyment of speed.

But if the aeroplane moved less rapidly, if it were no quicker than the fastest vehicle that moves upon the ground, would that lessen the temptation to soar into the sky, to move across its blue expanse, following the dictates of one's fancy, to come close to the shining clouds and look down from the heights upon our mother Earth?

Perhaps there is another, deeper, reason why man's conquest of a new field of experience in the air—a conquest gained by a sudden, terrific assault—should have been overshadowed by the advantages of its mere practical exploitation. This cause lies in the very nature of human experience.

Man needs time to absorb a thing and make it part of himself—time, which brings tranquillity and fosters the contemplative mood, time which changes outward events into inward experiences, time which grows into love. For only the lover can experience deeply.

Is not love that mysterious human power of achieving an inward union with the world? It endows us with the gift of entering into the things of the world, of accepting them in our hearts. It is the source of all mysticism.

Man's conquest of the world must be twofold. The conquest of action must be followed by a conquest of the spirit, which has the power of love. It is the spirit which welds events into experiences. (And still it is a long way from an experience to its realization in definite form.)

Like the first mountaineers and sea-rovers, and all who dared adventure where none had been before, the first pilots of the air exhausted their strength in successful action. Their stories report facts and observations. They had no time to feel, and still less to give form to what they had felt.

Not till later—though, compared with earlier developments of a similar sort, it happened unexpectedly soon, for speed seems to have affected even the processes of our inner life—not till

later did airmen bring home treasures of experience from their distant voyages. They lie scattered in the works of that comparatively small number of men who have explored the air in the full sense of the word.

I am only the collector of this material, though I have supplemented it with my own experiences on many flights. In displaying it here, I cannot bring myself to rob it entirely of its personal form. It is still so much the property of the individual who collected it on perilous flights that I should feel like a thief were I not to make due acknowledgment to its authors. Moreover there shines in many of the sentences, however awkward may be the form dictated by the impulse of the moment, a magical gleam of joy in fresh achievements and discoveries, and this I am anxious to preserve. In this way I reduce my own share in the book and do damage perhaps to the unity of its construction, but that I cannot help. I do not wish to claim the airman's view of the world as my own, for in these days that is beyond the compass of any man. My object is to combine the richness and variety of these new experiences into a comprehensive picture. The names and feats of those I call as witnesses to the wonders of the new world of the air are known to everyone, and I feel there is a greater attraction in hearing them speak in their own words, at all events where they are deeply moved by what they have been through and have found a specially characteristic way of telling it.

Coming generations will make themselves at home in this skyey realm, which to us is so new; they will smile at the wonder and astonishment we felt at things which to them will be commonplace and familiar. But to us, living in the childhood of the age of flight, these things are full of significance. Their strangeness repels and yet lures us on.

Flight takes us out of the pressure and anxiety of to-day into another world, not a dream-world of fantasy, not some remote sanctuary or hiding-place, but a world of new and strong reality, of freer spaces and wider vision. And we return rich in impressions of the eye and the mind.

STEWARDESS

Vicy Morris

UNITED AIR LINES  
CHICAGO, ILLINOIS

Joni Mc Kee, 629-  
Chicago to Denver  
10-10-50  
Jean Stewart  
Flight 629-10/10/50



It is not the earth alone that shows a different face from the perspective of the skies. We learn to look differently upon men and things. A new spirit is awakened—the spirit of flight, at once winged audacity and cool circumspection, the ability to stand above things and yet control and master them, to carry in oneself the earth as one wings the sky, and the sky as one walks the earth, to be reverent and alert.

### Speed

Speed—overhead  
Great airplanes flying  
Dipping and diving—  
Forging ahead.  
Bright wings of airplanes  
Leading and guiding  
Over the sea.  
Rising and hiding  
Themselves in the clouds,  
Then sliding,  
Like great giant birds,  
Out into the sunlight.

Beside and around them  
White sea gulls are soaring.  
Like wings of the angels,  
Not folded, adoring—  
But wide-spread  
For protection.

Speed,—the great ship  
Cutting swift through the gray sea,  
The heart-beats of its engines  
Pulsating steadily.  
Not made for destruction,  
But active for service.  
Fearless, courageous and strong  
To achieve.

Great Mind over all,  
Neither coming or going—  
Ceaselessly active,  
Living and knowing.

BERTHA RIVERS-THOMPSON

But regards  
again in 1947  
L. H. Jones.  
Flight 556-29-47  
How Duper Stewardess  
Herbert Stewardess

Flight 556 6-29-47  
John D. Gunt  
W. D. Gunt

Happy Landings  
U.S. Air Service  
Captain Atlanta, Ga.  
172-Sept. 7, 1947

### THE DOMAIN OF SKY

#### SEAS OF AIR

BEFORE the age of flight no more incredible statement could have been made than that the air would one day offer humanity one of its greatest experiences. The air, intangible, formless, transparent, of whose very existence we are scarcely conscious until it is denied us, until our lungs call out for it under water or on the mountain-tops. The air, to which we are accustomed from the first moment of infancy, has become something extraordinary, strange and perplexing. If this had been foretold, it would have sounded no less incredible than the forecast of our ability to move about in it, upward and downward, in any direction that fancy dictates.

What did we know of the air at that earlier time? We knew it consisted in certain proportions of hydrogen and oxygen, and that our lives depended on the latter component. That was almost the sum of our knowledge. Not until a commotion arose in the air, and the wind blew, did we feel that, despite its incorporeal nature, it was endowed with force. That ought to have surprised us! But then we did not think of it as the air, but as the wind.

And when the gales raged over the rain-wet roofs, loosening the tiles and sending them clattering into the street, or hurtled through the forests, making the boughs groan aloud, rending the trees and leaving them strewn uprooted upon the ground to our alarm and surprise, we attributed all this to the gales, the mighty winds we knew and feared, the storms we had encountered by night on some solitary road or on a sea voyage.

At the beginning of this century we hardly suspected that the calm and tranquil atmosphere, unmoved by wind or storm, could have the power to carry passengers with all their baggage

Box Mary  
Deepend  
Stewardess  
9/9/47

Best Wishes  
H. L. Huson  
Pilot EG-9-7-47

Bernie Campbell  
SEA - 11-28-50  
Flight-673

Mary Hollingworth  
Sea - 11/28/50 - Box-547



in the steel frame of a winged machine many hundredweights in weight. That was still no more than a dream.

The air has become for the airman what the sea is for the sailor. The sea changes, now calm, now surging with white foam under the touch of the storm; sometimes it shines many-hued in the sunlight, or is darkened by cloud-shadows, hiding unplumbed depths, reefs and crags; sometimes it brings sudden icebergs gliding out of the murk. And equally changeful is the air with its winds and storms, its mists and clouds, its showers and snowstorms, its hail and flashing thunderstorms.

The seaman has thousands of years of experience behind him. The airman has only a few decades.

Only in an open machine can one realize the full freedom and mighty power of the air; then the pilot is assaulted by the whirling current produced by his own speed. The wind caused by his movement forces him down into his seat, sets the loose tags of his leather clothes flapping noisily, gives him a feeling of participating in some desperate chase, arouses his defiance. The airman shelters from the attack by ducking lower behind his windscreen. But the air around him is full of wind. Soon he feels updraughts which throw his wings out of the horizontal and force the machine to right or left. He overcomes them by moving his control-column in the contrary direction.

But if the air is calm or the wind light and the airman knows his machine, he can safely trust himself to the equilibrium it maintains of itself. His control-column is close at hand, lest a sudden bump should surprise him. I have known pilots who have made solo flights over long stretches of uniform country and have spent the time writing letters or reading novels.

But if the pilot comes into more troubled air, such as he encounters over forests, rivers and valleys, he must take control more firmly. And if a gale or a hurricane overtakes him he needs all his strength to withstand it. Then the bumps become more frequent and more irregular; he must be strong, alert and skilful to ride them safely. Buffets from front or rear alternate with skids. Sudden gusts throw the machine up or down.



Clouds rising from a stratum of mist  
Photo: Peter Lautner

Capt Robert O. Frank WAC  
Flight 618 8-14-61





Piles of cumulus cloud  
The indefinite contours foretell rain or thunderstorms

FLY TWO/12 HONG KONG - TOKYO

PAA

PURSER ED BIGELOW

SEAS OF AIR

- STWD'S  
VIA SWENNSON

STWD'S  
C. CHAN  
1ST OFF  
AFNEFF

CAPT  
WILLIAMSON

2ND OFF  
A-ARIOIA

PURSER  
TOM  
FABIAN

STWD'S  
G. HART

PEGGY  
MARTIN

If a down draught forces the machine lower, as often happens about mid-day, when the sun's irradiation of the air is very strong, the pilot feels as though he were dropping into an air-pocket. But there are no pockets in the air. During a gale, a sudden gust may hurl the plane a thousand feet upward or downward. Steady nerves and strong hands are required to bring the plane safely through such a storm.

The air has its own dangers like other elements. A storm can drive the airman out of his course. Down draughts can force him to the ground, whirlwinds and scurries of snow can choke the breath out of him. But what would life be without its spice of danger? It only teaches us to value life more highly. The airman loves the air as the sailor the sea, for its dangers and struggles, which bring out his courage, strength and self-reliance. The air has never surrendered. We have had to conquer it and now it belongs to us.

The airman feels the storm much more nearly and intensely than his fellows on the earth and the sea; the storm is above and below him, it enfolds him completely. And yet it threatens him less seriously, for while it rends what stands firm, splinters what attempts to defy it, such as tree and mast, roof and sail, it carries the aeroplane before it. The airman has learnt how to deal with storms. The airworthy plane rides them as the seaworthy ship the waves.

But the airman can elude the storm. He sees the thunder-clouds from afar and he moves faster than they. In our latitudes a gale rarely attains the speed of an aeroplane. Only a tornado or a blizzard can overtake the airman.

He can escape a storm by rising above its level. At twelve thousand feet all is calm; nothing can disturb him there but "heat-bumps".

The airman on regular routes, carrying passengers, goods and mails, is given accurate weather-reports before he starts and is kept informed by wireless telegraphy during his whole flight. Therefore he can almost always avoid a storm, and an air-passenger rarely experiences any violent aerial disturbance.



One rarely flies through areas of bad weather unless there is some special reason for doing so. Thus headwinds at a great height may be so violent, and may so much reduce the speed of the plane, that the pilot has to reckon with the exhaustion of his fuel supply. If he is flying at a hundred miles an hour and is faced by a headwind of sixty miles an hour, his actual speed is reduced to forty miles an hour. But if the wind were behind him, he would be in clover, his actual speed would be a hundred and sixty miles an hour.

I feel that the air, that element which man has so recently conquered, provides a great proportion of the impressions which constitute the airman's world. I shall therefore recount in the following pages the stories of many flights over mountain, sea and ice.

Here I will only describe a flight through a storm. This story illustrates the enormous power of the air, and provides an example of how the pilot resists a storm and proves himself its worthy foeman. I will tell the story more or less as I heard it. The airman in question was a Munich pilot named Kraut.

One rainy day he was flying a three-engined Junkers machine from Berlin to Vienna. "In the aerodrome the ground was covered with puddles. A seaplane could not have made a greater splash than we made in taking-off. We dodged round chimney-stacks that loomed out of the mist, skimmed over meadows and fields and edged round every patch of woodland. The meteorologist at Dresden gave us the comforting news that the weather was just as bad everywhere else. So we roared forward into the mist, which grew thicker as the mountain-slopes ascended. We could have 'picked violets' as Udet used to say. A strong north-west wind carried us over the mountains. The eastern spurs of the Erzgebirgen lay below us. Crag, steep slopes and gorges glided past us.

"A strong down draught announced that we were past the mountain-ridge. Suddenly the wall of mist and drizzle was rent in twain and we came into bright sunshine. I was just about to congratulate myself, when I saw to one side in front of us a huge

wall of cloud with long strands like mighty white pennons flying from its upper edge across the deep-blue sky. The föhn! I felt my heart beating fast. If we ran into it it would be the worse for us! A black dust-cloud came whirling madly up the mountain-sides below, snapping the tree-trunks and sweeping up into the clouds. I wrenched the plane round to get out of the valley, but too late! A violent blow struck the machine from beneath; the wings quivered, the engines were shaken, and I was afraid that at any moment they might be torn out of the plane. We were caught in the whirlwind of the föhn.

"The machine was thrown in wild leaps through the air, while I tried with all my strength to keep it level. Then some mysterious force lifted us up and dropped us vertically, right wing downward. I kicked on right rudder, let the machine nose down, shut the throttle and caught her again. But at that moment a second whirlwind hit us. The machine reared up at a great angle, I gave her full throttle, but she failed to answer to the controls and dropped like a stone, left wing down. The violent buffets of the storm nearly tore the control-column out of my hands. I clung to the wheel, and my arms were nearly wrenched out as it jerked to and fro. At my side my mechanic was holding tight to the side of the cockpit. It seemed impossible to keep the machine aloft. I made up my mind to dive, turn into the wind and land on one of the slopes, taking care to do no injury to the passengers. It meant sacrificing the machine, but there was no help for that.

"We dropped quickly towards the earth. I looked out for something to establish the direction of the wind and caught sight of three chimneys. But the smoke was carried straight downward and then whirled off in different directions.

"The altimeter was at two thousand feet when the plane rose of itself with a sudden leap. It swept upward, spun round, rocked from side to side; suddenly we were enveloped in grey-white vapour as we staggered upwards through the clouds. Then a glint of sunshine appeared on the tip of the left wing and sprang over to the engine in the middle. The sun lay ahead of us



dazzlingly bright. The altimeter showed us to be at a height of seven thousand five hundred feet.

"I opened the throttle of all three engines. The plane was now flying level, still rocking violently but well under control. A few violent bumps shook us up pretty badly. Then we were in calm air. By this time we were flying at eleven thousand five hundred feet.

"On our one hand was the wild beauty of the wall of cloud with its flapping white pennons. Tattered föhn-clouds floated past, swept up into strange shapes. We were safe. The whole thing had lasted only a few minutes.

"When we landed in Vienna, the passengers shook me by the hand. Among them were two young people on their honeymoon; the husband, an experienced pilot, had immediately recognized the danger. Only one passenger was annoyed. 'I shan't fly with you again,' he grumbled angrily. 'It's disgraceful the way you shook us up. I've flown with other pilots and there was no rocking at all.'"

His complaint was as foolish as that of some passenger who blames a sea-captain when he has brought his ship safely through the storm and entered port.

#### CLOUD EMPIRE

Clouds present the airman with a second and quite novel aspect of reality.

What did clouds mean to us in the past? They aroused a mute aspiration as our eyes followed the movement of those gliding white masses across the blue; they became an object of fancy when their delicate contours took on strange forms of man and beast, a threat, when a hot summer's day was darkened by their shadows; they aroused our annoyance when a monotonous grey sky spoiled the prospects of a day's outing, or our anxiety when the lightning flashed downward from their black and threatening bosoms.

Clouds were always something far-off and unattainable, something fateful and remote.

It was rarely we reached their level, though sometimes their grey flood came pouring towards us on a mountain-side and immersed us physically in their murky darkness, or the cloud-vapour filled some valley below us, as we stood on a hill-top, and sent its grey tatters fluttering up to us.

We saw clouds only as shadow-patterns on the fields or the sea, or as a milky mass that filled the sky, or as a vaporous mist.

The airman sees and feels the clouds in their completeness, as they float freely across the sky; they are beside him, above and below him, as corporeal as himself. He encircles the cloud-mountains and traverses the cloud-valleys of the skies, as he travels round the peaks and through the vales of the solid ranges of earth. He is as intimate with them as the sailor is with the islands and bays of the sea, or the mountaineer with ridges and crags.)

They are, as it were, the countries in his aerial ocean: countries with quiet bays, long stretches of sandbank, lonely reefs and towering mountain ranges.

And at the same time they are the silent creatures, mysteriously mobile, that inhabit this ocean, now mild and ghostlike, now sinister and threatening, uncanny shapes of darkness.

Among the clouds the airman finds a new world. It is in constant movement, never the same, never repeated.

Earthly landscapes have their seasonable changes, but the cloudscapes repeat daily, in the play of their colours, the sequence of spring, summer and autumn. First comes the radiance of dawn, then a temperate toning down and finally, at sunset, the heightened reds, blues and mauves of evening.

It is a world without names. Those shining peaks towering over yonder, as though built to last for eternity, are nameless. That complete celestial continent with its countries, oceans, seas and lofty islands, that spreads from one end of the sky to the other, has no names. I have often felt a wish to christen those lands and seas of the sky, to bring that strange world nearer by



giving it names. How inadequate for its infinite variety are the few names given by science. Even the great international atlas of the clouds, which the meteorologists agreed upon at Upsala in 1894, is restricted to a dozen generic terms. They may suffice for a scientific classification of clouds, but they cannot call up before the imagination a fraction of the richness of their forms and colours. (Latin names spoil, for me at least, the scents and colours of flowers, and in the same way they smother the radiant life of the ever-young world of cloud with its thousand forms.)

On every cloudy day the airman discovers a new world in the skies—nay, many worlds at once, which rise and pass. He sees new continents created and destroyed. To the joy of discovering them is added the delight of witnessing their creation. He feels a breath of that Spirit which brooded upon the face of the waters when the world was made.

How often have I regretted that I could not preserve upon a photographic plate at least a selection of the loveliest of the cloudscapes I have encountered on a single flight. But a large and costly camera is needed to capture one adequate section. And what would remain of the brightness, the shining iridescence, the blue shadows, which give to the cloudscape its own peculiar vitality?

Other men collect butterflies to enjoy the bright, shimmering hues of their wings; in the same way I have collected cloud-pictures for the sake of their mysterious loveliness. I could understand a man taking up flying merely to study all the miracles of this cloud-domain, just as a naturalist, lured on by the migrant birds' hunger for sunshine, follows their path from north to south, or as a botanist ventures into primitive forests to unlock for one human mind at least the mysteries of those green, perfumed, animated solitudes.

I know of nothing that stimulates the imagination more strongly than this world of clouds, ever new, in silent motion, full of vivid or subdued colours. What treasures lie there for the eye of the painter, what paradisaal beauties, what purgatorial terrors!

Out of a milky sea a thousand-headed cloud-reef arises, jagged, full of brownish shadows, with white, glistening teeth. Yonder is an endless range of hills, softly undulating, light grey in colour, with darker hollows. A solitary column rises above it, yellowish, rounded, like the tower of some weather-beaten castle. It stands immobile; I pass on and, looking back, find it still the same.

A procession of mighty, fantastic forms slowly approaches through the clear air, one behind the other, some larger, some smaller, white and translucent, a spectral carnival.

A little white cloud drifts towards me, flowerlike, delicate as a breath, filled with light. One could almost pluck it with one's hands, to take to one's love, a fairy gift, finer than any tissue from the looms of earth.

Another little cloud I have often seen—far too often—above, below, before and beside me. Suddenly it would hang there, light, globular, carrying death within it, and dissolve into thin threads—the cloud caused by an exploding shell in the war!

A warm summer's day. A mountain chain grows up before my eyes out of grey chaos, like a flower unfolding on a cinema-film, a line of great grey monsters, shifting their relative positions with enormous impetus. Peaks soar up with snow-white edges that come curving out from within. It seems as if the whole sky will transform itself into one vast rigid mountain-system. Suddenly the rising peaks come to rest as though they were now full-grown and had reached their predestined height. Now all is still, the pointed summits stand motionless against the blue. Only one tiny cloud detaches itself from one of the monsters and drifts away, as though impelled by some unsatisfied desire.

Before me lies a milk-white sea of foamy cloud; it loosens with a whirling circular motion and shapes like gigantic mushrooms spring up; they lengthen, baton-wise, stand upright and curl over, to fall forward, darken, thicken and dissolve. Now there will be rain upon the earth.

About mid-day great cloud-horses race past, stretched forward as though at a gallop. Their flanks are dove-grey and



their shining white heads, thrown tempestuously upward, are aflame. They look so wild and centaur-like that one's heart beats fast at the sight of them.

A polar landscape, formed completely of clouds, extends across the sky, flat, with deep fissures and channels, like a huge glacier. In the distance it merges into a sea of mist, white, motionless, shadowless, and beyond lies a low, dark ridge, almost dead straight, like the edge of some nocturnal highland.

What makes this and many similar skylscapes seem so real is a second stratum of cloud that hangs over it, darker and denser.

Above the horizon of early morning is a deep veil of mist, grey and shadowy, separated from the bright blue of the sky by a ribbon of bright silver. Little shining clouds, gold and violet, drift down this ribbon of light as though it were a river. Soon the earth disappears completely, and only the bright horizon of the mist encompasses the blue sky at the same height as the aeroplane. Above it are more clouds, separated from the veil of mist by a delicate band of green.

The shining clouds on the mist-horizon grow dim and pile up into mountainous shapes, and within its circle floats a multitude of separate white cloud-islands, which drift away and dissolve.

I look the other way : a sea of fog, brightly irradiated by the sun. White strips of cloud move through it, and high in the blue, delicate as a breath, swim shining cirrus clouds like a flight of cranes.

Absorbed in the changing drama of the clouds I have forgotten the earth. Now I look down : it lies in the morning mist like the slimy, weed-covered floor of the sea ; red-tiled roofs of little villages glimmer like patches of coral.

Sometimes several mist or cloud-horizons are distinctly separated from each other by interspaces of varying colour, from leaden grey to gleaming white. They stand on the wall of heaven like living friezes. On each level, as on the tiered stages of some lofty theatre of the air, a separate cloud-drama is being enacted. Each has its own rhythm, its own forms, its own



Föhn  
On the right, the characteristic dark wall, from which burst forth long white pennons of cirrus cloud  
Photo: Peter Lautner





Föhn clouds  
Swept upward in strange shapes, tattered föhn-clouds float past  
Photo: Bayerisches Kriegsarchiv

colours. And in between is the grey dome with its gaps of blue, forming a background for yet another cloud-drama, quite distinct from those being played on the horizon-theatres, filling the void with its greatness and freedom. Beneath us move grey, globular masses of cloud; overhead float separate, white, diffused clouds of delicate form, too thin to obstruct our view.

Suddenly a tempestuous change takes place on the topmost horizon. Cliffs of white, shining cloud rise up. Each towers so loftily into the blue that you fear it will topple and fall. But a whole mountain range arises, complete with gleaming peaks and sinister valleys, supernatural in its size, a dwelling-place for the gods, and everything pales before its majesty and beauty.

My eyes can never tire of these lucent mountain chains, which seem to have been thrown up in some titanic ecstasy of creation. A sea of white, woolly clouds hides the ground below me. But again and again a tiny solitary cloud rises like a shrill flute solo above the great orchestra of moving masses, and drifts contentedly upon its way. "

A great cloud-continent breaks away, sinks and darkens to a leaden tint, while another rises from it in long garlands across the distance. Blue sky shines between them like a series of great lakes. I fly across one of these lakes. Far below in its depths the earth lies like a submerged city.

\* \* \*

One often flies for hours on end above a sea of clouds. A deep blue sky arches overhead. The fiery globe of the sun shines solemnly through the clear dustless air.

In his book, *"Alpenflug"*, Mittelholzer tells in words of deep meaning of a great spiritual experience induced by a flight above the clouds. "The foamy peaks of a vast cloud-ocean, shining in the evening light, surged below us, and the earth sank irreparably beneath it. The immeasurable heights of heaven, the infinitude of the distances before me made me shudder.



Thus the first navigators must have felt, when they put out upon the monstrous wastes of the sea, where their eyes beheld nothing but sky and water. We scarce remembered whence we had come. Every trace of our starting-point had been obliterated. Centuries seemed to lie behind us. We seemed to be creatures of a different race, lacking all contacts with humanity. The light that streamed around us was undimmed by any shadow. There was no dust, for there was no decay. Eternity reigned about us, and life was washed free of guilt and stain."

Here the aeroplane—yes, that modern means of transport which seems to us so trite and commonplace—bears us so far from the daily round that we feel ourselves to be creatures of a different race, and a day becomes eternity.)

These are the words of a contemporary airman, but they sound like a song of ascension into Dante's paradise, like the hymn of a pilgrim choir from the world beyond.

The airman, far away from the earth, remote from human kind, is so overwhelmed by the glory of light that he is plucked out of his kinship with the world and feels at one with the pure, timeless, sinless, origin of life.

Here the airman becomes the preacher of a new religion. Here the aeroplane becomes the chancel of an invisible church.

But not every flight in the solitudes above the clouds brings to the airman a sense of reverence and awe. The beauties of the world of clouds must not make us forget the manifold dangers they hide for the pilot. Clouds may be the precursors of a thunder-storm; they may bring lashing rain and cutting hail, their delicate ice-crystals, produced in currents of frigid air, may coat the wings of the plane and bear the pilot down to earth with their weight. Great masses of cloud obstruct the airman's sight and may become dangerous over unknown country.

Sir Hubert Wilkins, whose adventurous polar voyage in the submarine *Nautilus*, carrying the grandson of Jules Verne on board, came to a premature end at Bergen, was once flying across the Endicott Mountains, in preparation for his flight to the

North Pole. His object was to dump fuel-supplies at Barrow, the northernmost settlement on the American continent.

Suddenly a wall of cloud arose before him and spread rapidly across the whole range, melting into the clouds above him. His chart was inaccurate. It gave five thousand five hundred feet as the greatest altitude of the range. But when the machine had reached nine thousand seven hundred and fifty feet, single peaks were still soaring out of the dark grey. A bump only a few yards deep would have smashed the heavily laden machine against a rocky peak in the shifting clouds. "It was a weird and uncanny sight," writes Sir Hubert, in *Flying the Arctic*. "We seemed to be the only speck in a boundless world. There was nothing for contrast and from which to judge space or distance; nothing in front of our eyes except the tapering bonnet of our engine; nothing below us to be seen but the same grey, grey mass. I am sure that we could find no situation more weird if we were to travel through space to the moon."

Both airmen, the Swiss and the Australian, were equally moved by the limitlessness, the sudden vacancy, about them. The novel experience of travelling alone in space impressed them both with the same force. But how different were their feelings! The one was filled with shudders of awe, the other with shudders of fear. Every experience produces different effects on different temperaments, but there is a great distinction between circling in the evening sunshine above the peaks of one's native land and flying over uncharted ranges towards an uncertain fate.

When Wolfgang von Gronau was preparing for his great flight to North America and made his first trip to Iceland, he had scarcely passed the southern point of Norway when huge masses of cloud, pouring down from the north-west, forced him to rise higher and higher. The sea was completely hidden from view.

Through a sudden gap in the clouds the Shetland Islands came in sight, and this much sooner than he had expected. For



Oste - Stockholm 15/9-60

Goran Lind

Sten Appelgren  
56

THE DOMAIN OF SKY

a moment he looked down on green meadows and quiet bays. Then the strong wind had carried him past them and the clouds closed in again. The next land to be sighted was the Faroe Islands, and he had enough petrol to last till he reached them. The fuel for the rest of his flight was awaiting him in the harbour at Trangisvaag. But the hours passed and still no sign of the Faroes. At last von Gronau thought he saw white hill-tops in the distance, but they were only the gleaming summits of cloud-ranges that spread endlessly across the sky.

The sight of this northern cloud panorama is moving and beautiful, but how terrible was the thought that he had missed the islands and lost his way!

Soon he reached the end of the great cloud-bank and saw the storm-tossed sea stretching before him. He could see quite clearly, but nowhere was there any sign of land. He looked back in despair, and saw dark hill-tops behind him amidst the white clouds.

The cloud-bank was lying exactly above the islands. He had to take the risk of dropping through it to find the bay of Trangisvaag.

One glance behind had saved his life and the lives of his companions.

Man is beginning to feel at home in the changing domain of the clouds; to pursue his path while they float lazily beside him, or surge past in stormy motion; to watch them calmly rising out of nothing, gleaming, flaming, wrapping themselves in darkness, gliding, dissolving and melting never to return.

This life among the clouds, this close encirclement by silent-moving, incorporeal shapes of air, which yet seem so concrete, shapes which vary by day from diffused white to the deepest black, and at sunrise and sunset exhibit a most brilliant variety of colour, this is an experience so manifold and so strange that it recurs in some form in every book and report that deals with flying. It is a subject without end, inexhaustible.

Best Wishes  
7/6 M. L. Shirk  
WAL 8/14/61  
Zet 618.



1



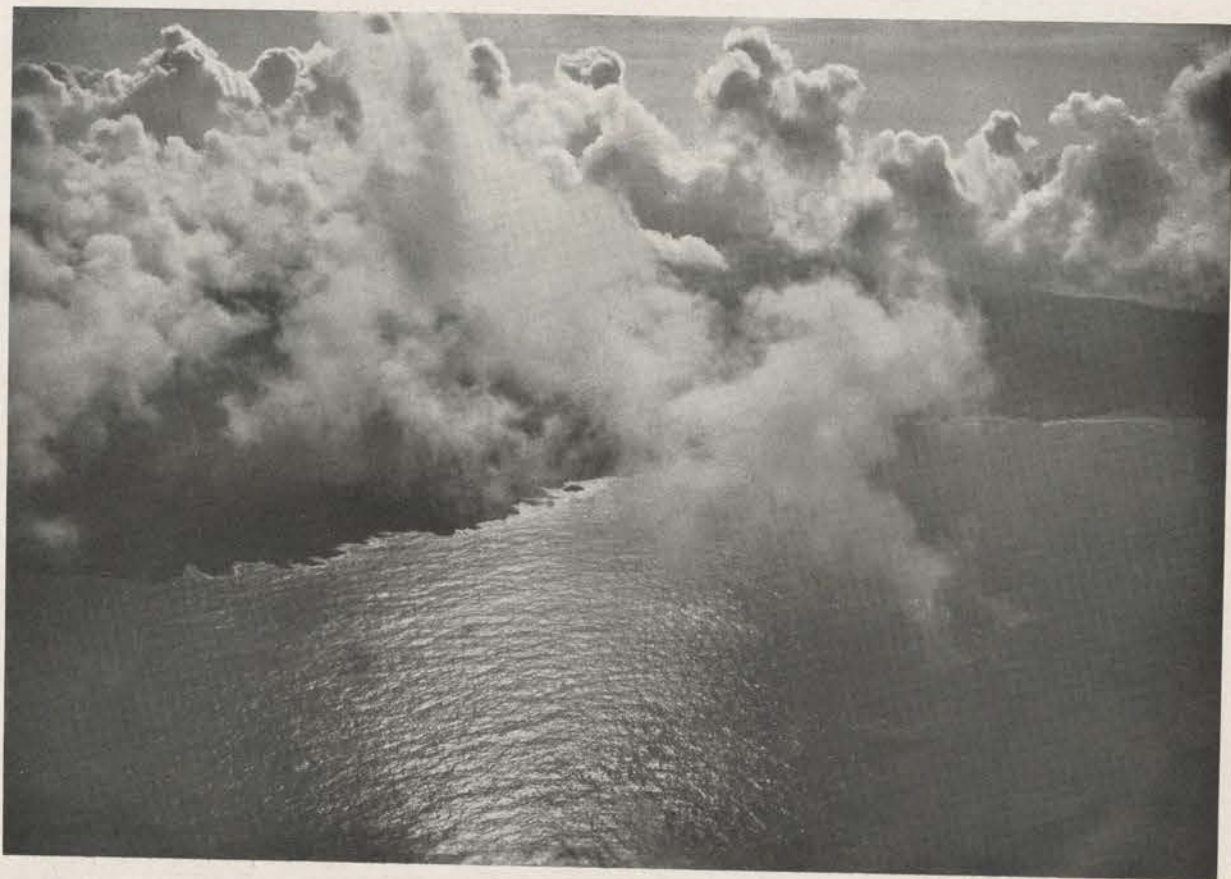
2

1. Cloud mountains  
2. Cumulus clouds bent by the wind  
Photo: Peter Lautner

Sten Appelgren 2000 ft. N.A.L. 4th 618 - 8-14-61  
Good Luck!



7th. 20. '60. Tokyo - Honolulu  
 Currier Jack & anyone  
 Stds. Frankmaester  
 Stds. Jack & anyone



Clouds and the sea  
 Cloudbank over the coast of Spain  
 Photo: "Luftschiffbau Zeppelin"



City by the sea  
 Marseilles. On the hill, Notre Dame de la Garde; out to sea, the islands Château d'If, Ratonneau and Pomègues  
 Photo: Photogrammetrie

Cynthia C. Thompson  
 Stewardess Western Airlines





City by night  
The lights of Rio de Janeiro. The shadowy shape in the centre is the Sugar Loaf, Pão de Assucar  
Photo: Freiherr von Dungern



City under snow  
Sofia from about 1,600 feet; in the centre, the Alexander Nevsky Cathedral





City from a height  
Aleppo, Syria, from about 8,200 feet. On the artificial mound, the citadel; in front,  
the Kuwaik River

The seaman, the mountaineer and men of other callings have their own particular contacts with cloud and mist and fog. But none lives so close to them as the airman, none sees them in such variety and for none other can they be of such momentous importance.

When the pilot flies by night and the stars twinkle above him through the dark cloud-drifts, or pale, ghostly hills stand darkly ranged about the moon, then he forgets the earth and human kind and dreams come to his mind such as no one has dreamed before.

How majestic this night-scene described by Byrd: "On the side of the sun, which of course was far below the cloud horizon, the clouds took on weird shapes and colours, but on the other side they were ominous and gloomy. During the day we had some terrifying views; there were fog-valleys, dark and sinister, hundreds of feet below us. At times distant cloud peaks took on shapes and colours of rugged Arctic land and mountains. . . . Around us were ominous, towering peaks, some of which reached far above us. As we could not afford to go around those that lay in our path, we would dash through them in a darkness so intense that we could not see the wing-tips. The fire from the exhaust-pipes of our faithful engines, invisible in the daytime, shone vividly in the dark night. The thirty thousand flashes of fire per minute through the exhaust-pipes made a cheering sight against the black."

What a strange and uncanny picture: the aeroplane surrounded by fire high up in the black clouds of night!

The affectionate, often poetic manner in which the airman—that technician, that mechanic!—tells of his adventures among the clouds, gains an especial charm from the impermanence of the subject, from the fact that the cloud is gone almost before it is formed and can never come back again.

The airman is awake to the mute symbolism of the clouds. Perhaps, in the eyes of eternity, our life and all existing things are in the same state of constant transmutation and rapid disintegration.



## FOG—THE ENEMY

A strange thing is fog; it lies concealed and creeps up with cat-like stealth. It is the "highwayman" of the skies, suddenly appearing in one's path and calling on one to stand and deliver.

A pilot took off from the aerodrome at St. Louis and flew northward on the way to Chicago. After flying peacefully over the fields and woodlands of Illinois, the plane arrived punctually in Springfield at 5.10 p.m. and, three-quarters of an hour later, at Peoria. It left the aerodrome at Peoria at 6.10 p.m. and almost immediately a light mist sprang up with the deepening dusk and hid the ground. The mist rose and spread. About thirty miles north-east of Peoria night fell.

The pilot went on flying towards the north. He could see nothing below him. Overhead a few great balls of cloud were suspended, still catching the last rays of the sun. Between them the stars shone out of the blue night, growing brighter and brighter. The fog lay pale and motionless beneath, lighted by the rising moon. The pilot grew anxious. How was he to find his landing-place at Chicago? It was impossible to land in the fog; he would run the risk of crashing against a spire or a tree. He pulled the ignition-lanyard but the landing-flare fizzled out. Flecks of light in the fog betrayed the fact that he was over the suburbs of Chicago.

He searched in vain for a break in the grey blanket.

He turned and flew west, hoping to come to the edge of the fog-zone. But even in this direction there seemed no end to it. Then he made his way southward, for he knew from experience that fogs frequently end at the Illinois river. But here again he was disappointed.

A man flying alone through the night; clouds, moon and stars above him, fog beneath; a man lost in the sky, who cannot find his way back to earth.

What stuff for a ballad of our "unromantic" age!

The pilot was Charles Lindbergh. He was flying a mail-plane. At twenty minutes past eight his petrol was exhausted and the engine began to miss. With a heavy heart Lindbergh decided to desert his aeroplane. He drew the flash lamp from his belt and jumped overboard with his parachute.

As he vanished into the fog he heard the engine start up again, and the derelict machine went flying downward in spirals. He had not switched off the ignition and, as the machine dropped downwards, the last drops of petrol had run into the carburettor.

Lindbergh landed in a cornfield. The aeroplane crashed shortly afterwards in open country.

Imagine it for a moment: a derelict aeroplane circling alone through the sky! A man dropping back to earth through darkness and fog!

Even the most experienced pilot feels some anxiety when the grey veils of fog come floating towards him and long dank wisps curl round his machine and dissolve among the struts of the wings. Fog generally lies near the ground, and so it forces the pilot either to rise above it, or to fly close to the earth, in which case he is threatened by all sorts of elevated obstacles. But the strata of fog are often of such great density and spread in all directions with such surprising quickness that he has no choice but to dive into it. Then he flies through vapour like the steam from a washtub. It is only quite recently that flying through fog has lost its perils. Fog reduces visibility to nothing; the pilot does not know when the spires and chimneys of a town may not rise up in front of him out of the depths; the fog may conceal a cliff or the tree-tops of a wooded hill. But it is not only his ability to see that suffers, he is also "robbed" of his sense of equilibrium. That sounds very odd. On the ground our sense of equilibrium never deserts us, not even when we shut our eyes. We recognize up and down, right and left. But the airman who is unable to compare his position with the plane of the earth suddenly loses all sense of whether he is flying horizontally or diagonally. Thus



it may easily happen that his machine is overbalanced and side-slips. If so, he falls, in the most literal sense of the word, out of the clouds. In this way I lost one of my best friends.

The difference between the man in the aeroplane and the man on the ground is as follows: On the ground we are subject only to the law of gravity, while in an aeroplane we are subject also to centrifugal force. This deceives and confuses the sense of balance, which has its seat in the ear.

But a means has been found to render the most treacherous and dangerous fog quite harmless.

The discovery of the "turn indicator" has robbed fog of its terrors for the airman. It makes use of the fact that, once a top has been set spinning, it tends to preserve its upright position under all conditions. The pilot requires great experience, however, before he can correctly use this instrument, for his machine is constantly altering its position, turning, banking, gliding or diving. To this end he takes a special course of instruction, he learns "blind-flying", in which he has to steer by his instruments alone. By means of the turn indicator one can now fly quite safely over unfamiliar country in the densest fog or on the darkest night.

But there is still danger in landing in a ground-fog a few feet deep, for then the pilot cannot get a proper view of the landing-ground.

Ships are sometimes compelled by a low-lying fog to postpone their entrance into port; in the same way a ground-fog may compel the pilot to find some landing-place where the air is clear. Successful attempts have been made to use wireless as a means of guiding the pilot who is trying to land in a ground-fog.

The airman who decides to fly above fog must rely entirely on his compass, or at night he must steer by the stars, like a sailor. The compass may mislead him; it may be affected by magnetic currents, as has happened in northern latitudes, particularly near the pole. Von Gronau observed on one of his flights to Greenland a compass variation of 40°.

NAV: *George N. Ryan*  
*Western Air Lines*

STEWARDS:  
*John McMillan*  
*James D. Sullivan*

II PILOT:  
*John W. Wenzel*

CAP: *London Gyro*

PARKER:

*George N. Ryan*  
*John W. Wenzel*  
*John McMillan*

*John W. Wenzel*  
*John McMillan*

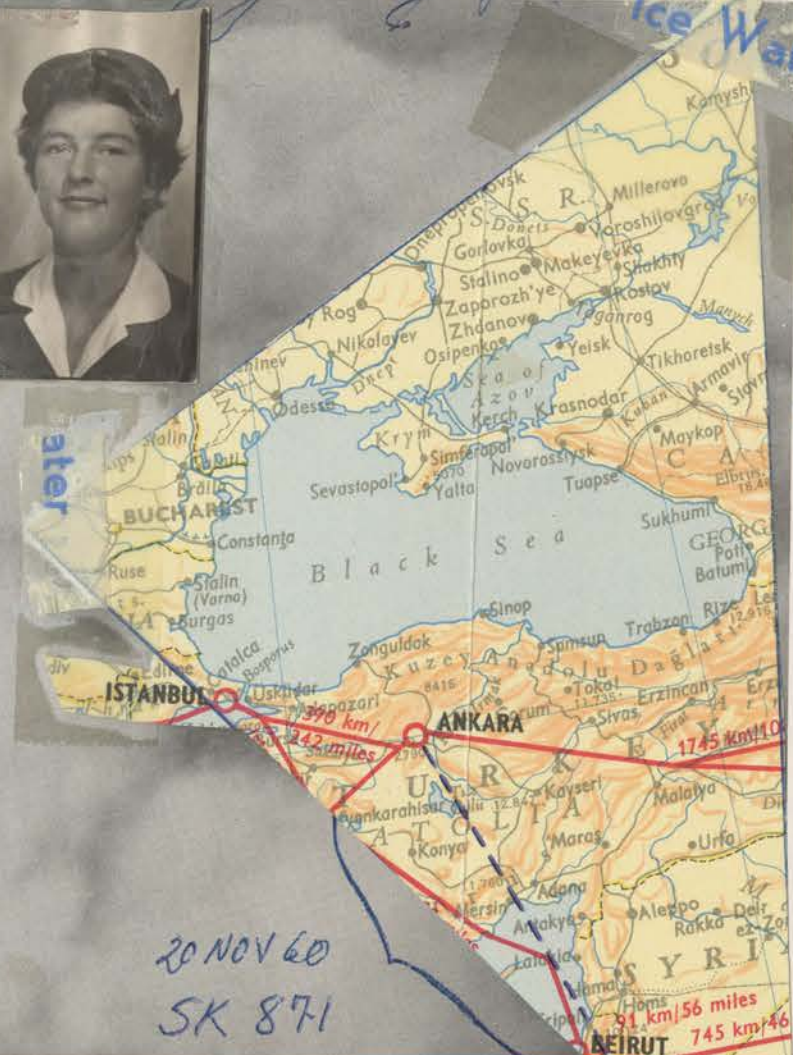
*John W. Wenzel*  
*John McMillan*

STEWARDS:

*John W. Wenzel*  
*John McMillan*

STEWARDS:

*John W. Wenzel*  
*John McMillan*







Munich, with the tips of the Frauen Kirche; in the background, the Alps and, above them, cirrus cloud  
Photo: Peter Lautner

The pilot must therefore be always on the alert to resume visual contact with the earth. He must try to find a gap in the fog through which he can see, or he must drop down low enough to make sure of his bearings. This may be a very dangerous proceeding, especially over unfamiliar country.

Von Gronau and his crew were nearly killed when he descended through a Newfoundland fog in his anxiety to find Köhl and von Hünefeld, who had landed somewhere on Greenly Island. Suddenly the rocky coast was just ahead of him, and only by a great effort did he succeed in lifting his plane and clearing the edge of the cliffs.

Many brave pilots, who tried to fly across the far northern seas before the discovery of the turn-indicator, were lost for ever. These terrible fogs are caused by southern air-currents, full of moisture and warmed by the Gulf Stream, crossing the North Atlantic and meeting the cold polar air-currents flowing down the Davis Strait.

Fog has much to answer for ; it has caused many disasters. But its 'power is broken' ; the ingenuity of the inventor has vanquished it.

### (THUNDERSTORMS)

Clouds and fog have a greater reality for the airman than for the stay-at-home on the ground. But the thunderstorm loses much of its natural effectiveness, for the crash of thunder is inaudible to the pilot whose ears are already filled with the roar of the engine.

Thunderstorms are rarely dangerous to the airman ; one might say never, except on long distance flights over unfamiliar country. On regular routes the meteorological service, which draws its net closer and closer, gives him timely warning of their approach. So the pilot knows in advance that a thunderstorm is ahead of him, knows its direction and its altitude, and can alter his course accordingly.



He sees the dark, threatening clouds pile up in the distance. He is familiar with the different forms of cloud and knows from experience that those mountainous shapes rising ahead of him, dark and jagged with such a clearly severed lower edge, are not dangerous so long as they retain their sharp upper contours. But if they begin to soften and dissolve, they presage a thunderstorm, and he makes a detour to avoid the danger-zone.

Flying on under a clear blue sky, he can see on his one hand the flashes darting in the cloudy murk, cleaving it with golden blades. He flies beside the storm. It takes place before his eyes like a drama on some heavenly stage. Suddenly the masses of cloud lose their firm outline and spears of rain rush downward like a grey curtain towards the ground.

An airman is flying towards the hills. The sky above him is cloudless. Suddenly the night is rent asunder. For a second the craggy spine of the range is lighted up by wide-branching lightning-flashes. Clouds hang in the darkness, garishly illumined. The people in the cottages down below hear the rolling of the thunder. For them it is just a thunderstorm. For the airman it is a mute miracle of light in the womb of darkness.

But woe to the airman who cannot avoid a thunderstorm ! Then he is involved in what may be a life and death struggle against the primal forces of the air. Sudden gusts shake him, rain beats down upon him, lightning-flashes stab the air at his side. Yet, strange to say, aeroplanes are rarely struck by lightning, despite the immediate proximity of the flashes.

Returning from her flight to the Canary Islands and across Tunis and Algiers, Marga von Etzdorf set out from the African coast to fly about a hundred and fifty miles straight across the Mediterranean to Sicily. From the south came the mutterings of a thunderstorm, and the wind blew her out across the sea with increasing speed.

Rain-clouds darkened the sun and suddenly a dusky cloud detached itself from the masses in front of her and was rent

by a flash of lightning. The airwoman flew round it, for she could see clear sky in the distance. But a second thunder-cloud loomed out from behind the first and unrolled like a vast, yellowish-black wall in front of her.

The storm spread out to left and right as far as she could see ; she dared not diverge too far from her compass-course, for here above the open sea there were no land-marks to guide her ; she had no choice but to fly into the storm. The lightnings flashed around her. Now she was gliding through black clouds, now flying in terrifying proximity to the foam-decked sea, which had taken on a repellant yellowish-green colour. Sometimes the clouds about her were so dark and impenetrable that she could scarcely see the water immediately below. Air-currents seized her machine and tossed it hundreds of feet up or down like a shuttlecock.

There was no question of turning back. The tempest was as violent behind as in front. She had now been flying for a good hour and must have covered more than half her course across the sea. Heavy rain began to fall. Hitherto she had been sheltered from lesser showers by the windscreen, or the stream of air from her propellor had protected her, but now sheets of water poured vertically down upon the plane.

Anxiously she searched the horizon wherever it was visible between the clouds. But where one thunderstorm ended another began. It was as though the Flood had come again.

Thus she flew on towards an uncertain fate. Two, three, four long hours went by. The storm still raged with unabated violence. In Tunis and Algiers, it tore the roofs from the houses ; ships were engulfed upon the high seas and torn from their anchorage in harbour ; such cloud-bursts had not been known for years past on the Mediterranean coasts.

While the lightning flashed around her, and great sulphur-yellow mountains towered on all sides, she seemed to hear her old flying-instructor say to her : " If you can't fly round a thunderstorm, turn back at once, or land." In her despair she began to talk to her aeroplane, begging it not to fail her.



Meanwhile she was searching mechanically, though hopelessly, for some sign of land, and suddenly she caught sight of a dark point among the flying cloud-wrack. It was not the land she yearned for, but a ship, a steamer, and it was following the same course as herself.

One more terrible hour went by. She was tossed to and fro by violent air-currents. The wind was so strong that sometimes her machine stood still.

Then at last she sighted the rocky islands that lie before the coast of Sicily, as she approached from the west. After five hours of flying through thunderstorms, she brought her little plane, *Kiek in die Welt*, safely to rest on a rain-soaked Sicilian meadow near the village of Santa Croce Camberina.

Such, more or less, is the account of this incident in Marga von Etzdorf's work, *Kiek in die Welt*, the most vital and personal book on flying that I have ever read.

How much more impressive would be the effect of a thunderstorm if the pilot could hear the crashing of the thunder! Such was the experience of Groenhoff. He was up in a light glider over Munich when a thunderstorm broke about him. Surrounded by a maze of lightning-flashes, bombarded with hailstones that perforated the fabric of his rudder and buckled his machine, he was carried on for a hundred and fifty miles across the Bohemian and Bavarian forests to the banks of the Eger.

Is not the thought of this boy, sailing across the sky on a thunder-cloud, a complete fulfilment of our childish dreams of flight?

#### WONDERS OF THE AIR

The sailor tells strange tales of the sea, of surprising and mysterious happenings that only those who know the sea can believe. In the same way his brother of the air can tell of wonders of the skies which no one before him has ever set

✓ Ros R. Burley - Light - U.A.L. 286  
June 1, 1950  
Dwain C. McDonald  
Wayne Erling - went close to mts!  
Beautiful!

eyes on. These are no mere airman's yarns! Not that the pilot has none to spin, but a safe means has been invented to convince the doubting Thomases—the camera. By "shooting" these wonders, to use the slang phrase, the camera puts them beyond all question.

The sailor tells of carposants at dusk that gleam blue upon the masthead, of mysterious lights that glimmer across the water in the dark, of flying fishes falling on the decks, of spectral ships that pass silently in the fog.

The airman has other wonders to tell of.

#### The Double Sun

A narrow bank of black cloud, slightly diffused along its lower edge, obscures the sun. But the light shines through white clouds that well out above and below the sombre bank. Suddenly a second, smaller sun shines out, clearly, dazzlingly, far below the spot where the real sun is hidden. It hangs in the clear air above the ground. It is not a reflection from an expanse of water; it hangs independently in the air.

Two suns at once! The first day of a dual-sunned universe! An awesome and astonishing sight!

If only there were no wise men to inform us, the world would be enriched by a new miracle. But these fellows can explain everything. I do not pretend to be one of them, and this is all I can say about it: this phenomenon is due to extremely fine crystals of ice which are suspended in the air and reflect the sun. These crystals are invisible to the eye; they do not even form a veil of mist. For the onlooker the sun is reflected by the clear air itself.

For me the sun remains a mighty and eternal magician; it can produce reflections where and how it will—even in the midst of the air. O miracle of the sun! O little airy mirror on the wall of heaven! The wise men have found a name for you. They call you the Double Sun.

✓ H. H. Parker 5-30-50  
J. B. Roberts 5-30-50 SEA-VR  
Nancy Montgomery 199-30- SEA-VR.



*Artificial Clouds*

Everyone is familiar with the "sky-writers" who inscribe some slogan in letters of vapour on the sky above our cities. I am not going to speak of them, however, but of a remarkable phenomenon which airmen have observed, namely, that under certain atmospheric conditions, aeroplanes can themselves produce clouds.

A machine was flying one afternoon in May over the summit of the Zugspitz, round which was a wall of cloud eleven thousand five hundred feet high with great towers of cumulus rising above it. Through a gap, about six square miles in area, above the snow-covered summit, blue sky was visible. As the aeroplane flew across this gap, it carried behind it a tail of cloud over a thousand feet in length.

It must not be thought that the plane drew after it parts of the clouds themselves. What happened was this: the exhaust-gases from the engines, which carried a strong negative charge, caused a peculiar process of condensation; the state of the atmosphere between the walls of cloud was so favourable to the formation of cloud that the exhaust-gases were enough to make the clouds form, as it were, of themselves. "Cloud-tails" of this kind have been measured and have been found to attain a length of thousands of feet.

*The Mysterious Ring*

Once, on a flight towards the Alps, I observed a strange phenomenon which for some time I thought inexplicable.

On the ground the morning was grey and depressing. The clouds hung motionless, darkening the air above the aerodrome at Schliessheim. Then a little patch of blue appeared in the grey. We flew towards it and through it.

Beyond, the sun was waiting for us, huge and solemn, like the purest chord in a heavenly symphony. As far as eye could see an ocean of white fleecy clouds, unbroken by any gap,

lay below us. Then the clouds slowly began to move. The tides of this ocean were astir. Translucent, profoundly calm, the cloud-masses streamed away beneath. A turn and the vast icy ridge of the Alps soared up with its rocky serrations in the deep blue to the south.

We forgot time, the earth and all the affairs of men. We flew without speaking towards the silvery ridge of the distant mountain-chain. Then a peculiar phenomenon aroused us from our awe. We shrugged our shoulders and pointed to a circular patch, glittering with all the colours of the rainbow, that rose and fell on the drifting whiteness of the clouds. We often discussed this strange phenomenon and put it down to a sensory illusion.

Many years afterwards, I found in Amundsen's book on his North Polar flight the following explanation of a similar experience: "Here"—Amundsen was flying over wide stretches of drifting ice—"I saw the most extraordinary optical illusion I have ever observed, a thing of incomparable beauty. Far away upon the fog was a complete image of our own machine, surrounded by a ring in all the colours of the rainbow. The spectacle was wonderfully beautiful and strange."

And Amundsen's pilot, Dietrichsson, adds in his report: "This phenomenon followed us across the whole sea of fog and was of magical beauty."

Byrd had the same experience. "When we passed near Halifax, we were flying over beautiful white clouds, but the sun was bright above us. The shadow of the plane was etched on the clouds, and around it was a rainbow. Here was an omen of good luck, following us on the white clouds beneath, at the rate of one hundred miles an hour."

But a passage from Wilkins' *Flying the Arctic* shows how the same phenomenon can have an entirely different effect in regions still unknown to man. "On the opposite side to the sun there shortly appeared two complete rainbow circles and in the centre a ghost-like shadow of our plane. It seemed to me that it mocked us as we speeded on. The very shape of the



shadow gave it a sinister appearance. I have seldom, in a variety of experiences, been so awed."

What seemed a happy augury to Amundsen and Byrd aroused fear and anxiety in Wilkins. On our flight towards the Alps the reflection of the aeroplane was so much broken by the agitated and uneven masses of cloud that we perceived only its radiations, after the fashion of the aurora borealis. That at least is my explanation of the mysterious ring.

Many years later I was telling Peter Lautner, the Munich pilot and meteorologist, of this wonderful phenomenon, when he silently handed me a photograph from his files: he had preserved the miracle some time before on a photographic plate.

#### *The Circular Rainbow*

Another cosmic phenomenon which has always fascinated the mind of man to a very special degree is the rainbow, and this, too, presents itself to the airman in a new and unusual form.

When Marga von Etzdorf was flying along the north coast of Africa in her canary-yellow aeroplane, *Kiek in die Welt*, on her way to the Canary Islands, small round white rain-clouds appeared on her course. She says: "I had to fly through many of them and on each occasion there was a little shower of rain, but, as they were not dense enough to obscure the brilliant sunshine, it came about that I flew in the midst of a wonderful rainbow of magnificent colour. Seen from an aeroplane a rainbow appears as a closed circle surrounding and accompanying one's flight."

Flying through an area of tropical thunderstorms in the interior of Africa, Mittelholzer found the rainbow enhanced in its splendour and radiancy. "Suddenly surrounded by a flood of golden, warm sunshine, the *Switzerland*, still dripping with moisture, flew like a gigantic white dove out of dark, infernal shadows into a wondrous, supersensual world. Rainbows of



Lightning by night  
Clouds banked before lightning flashes above a range of hills  
Photo: Peter Lautner



United Airlines Flight 398 - SFO to SEA Sept 27 1969  
 Capt. E. Clark  
 1st. Officer A. A. Jewell  
 2nd. Officer J. J. Ferraro  
 3rd. Officer J. J. A. A. A.  
 W. Lindbergh



Receding thunderstorm  
 Photo: Peter Lautner

unique richness of colour arched above the pinions of our plane, and moved with us, swift as an arrow, past dense storms of rain."

The circular rainbow is a constant surprise to the airman. A pilot who was crossing the Ionian Sea, past the islands of Anti-Paxos and Paxos, caught sight of Corfu below him, set in a lovely rainbow of circular form.

A terrestrial town embraced by a rainbow—what a lovely and unique picture from the gallery of the airman!

*Fata Morgana*

Airmen can tell of mirages similar to those beheld on the horizon by travellers across the desert. After a long and tiring flight the eye appears to see the strangest sights in the shimmering air beneath. Clouds and banks of mist seen from afar look like mountain ranges and shining snow-capped peaks.

Thus a low-lying mass of cloud, seen by Byrd as he flew across the snow fields of the north polar regions, seemed to him an undiscovered chain of mountains. To Lindbergh's eyes, as he flew across the Atlantic, fog-banks took on the semblance of land. This was in the early morning of the second day of his flight. "Numerous shore-lines appeared, with trees perfectly outlined against the horizon. In fact the mirages were so natural that, had I not been in mid-Atlantic and known that no land existed along my route, I would have taken them to be actual islands."

Major Fitzmaurice, who acted as Köhl's relief-pilot on his flight with Baron von Hünefeld from Europe to America, tells of a similar sensory illusion. "We examined our course most carefully, studied our instruments and the position of the sun, and finally decided that we must be many miles inland over Labrador. Steering entirely by the sun, we turned south-east and flew on in the biting cold of a landscape where life seemed to be extinct. Staring attentively ahead, I could see a great city with church-spires, domes, streets and even moving cars.

WESTERN AIRLINES FLIGHT 635 SEATTLE TO SAN FRANCISCO  
 CAPT. Joseph R. Kuntz  
 1st. Officer J. E. Cook  
 2nd. Officer J. A. Kammerer  
 3rd. Officer J. A. Kammerer  
 Sept 20, 1969



On the one side I made out a regular aerodrome with sheds and hangars and aeroplanes standing outside them. I got the telescope, and every time I examined these welcome sights with Köhl, they turned out to be a mirage."

Three typical examples of wish-dreams: Byrd wished to discover mountains, Lindbergh to sight land and Fitzmaurice to find a landing-ground. One's wishes become tricksters and magicians. *Fata Morgana* of the mind!

#### THE PLAY OF SHADOW

The surface of the earth is made wonderfully alive for the airman by the cloud-shadows that glide now lazily, now in haste, across fields and woods. From greater altitudes they so closely resemble dark patches of woodland that one can scarcely distinguish the one from the other. The movements of cloud shadows transform monotonous stretches of pasture-land into restlessly mobile expanses, curiously and confusingly patterned.

(Cloud-wrack wanders across the snow of polar landscapes like grey, shadowy fingers. Revolving shadows on the surface of the snow betrayed to Byrd the approach of a dangerous snow-eddy.

On a flight from Cologne to Paris I saw beside and a little above me a great procession of grey clouds flying past at high speed. They did not obscure my view of the autumn landscape and looking down at the ground, covered, as it were, by a dark herd of shadows, I found to my astonishment that they were not moving. I looked more attentively, observed the edges of the fields where the shadows began and ended. They were not moving one hand's breadth beyond these limits. They lay idly on the ground, while the clouds, whose images they were, hurtled wildly past me.

Were they weary of their unending race? Had they simply dropped out?

I confess it took me some minutes to fathom this obvious reversal of the simple laws of nature. The clouds beside me were as still as the shadows below. Only the speed of the plane made them appear to be in motion. But the effect was an astonishing one.

A pilot finds a most amusing pastime in watching his own shadow. I once had so uncanny an experience that I must find space to narrate it.

One winter's day I was flying from Munich to Berlin. Behind me my only passenger, a woman muffled in a fur coat, was leaning forward in her seat, looking out of the window. I felt that her pale-blue eyes were fixed intently on the ground beneath. She was happily intent; her breathing seemed to bear the plane along.

Suddenly she tapped me lightly on the shoulder and pointed downward. Her eyes smiled like a child's: the shadow!

Far away to one side of us a rounded grey form was running across the snow. It was so far away, and seemed so undeniably to choose its own path, that we felt it had nothing to do with us. It ran on indefatigably, always at the same speed, like a well-trained dog running beside a carriage.

The woman behind me clapped her hands, as though to encourage the trusty shadow-dog below, to make him understand that we had seen him and approved of him and appreciated his achievements.

One could not help admiring him. He came to a village with fences, houses and spires—and glided through it without colliding with anything, without doing himself any harm. He ran on, cool and unperturbed. Then came a river. Without a second's hesitation he was across it.

We turned a little towards the east, and the shadow vanished immediately.

Here the snow was less thick; it lay spread like a breath across the fields, revealing the soft greens and browns of the earth and the darker green of the woods.



Steward Girouard F. Melon The flight

78

THE DOMAIN OF SKY

Nuremberg! The sun was too bright for me to distinguish the beloved spires of my native town. A castle towered out of the mist. The fields below us were picked out with stacks of hop-poles. Further off, bags of flour lay strewn around. The bags of flour were moving. We dropped suddenly earthward in a wide curve, lower and lower, and behold, they were changed into grazing sheep, and there was the shepherd looking up at us!

I flew on alone—my companion had left me at Nuremberg—and yet I was not quite alone, for there it was again, my trusty shadow. (A poor little creature, seemingly half-starved, he went loping along across the snowless ground.) The sun was shining brightly. He ran as before, straight on, indefatigable, unhesitating, never balking at any obstacle. Now he was swimming along the Ludwig Canal, traversing the whole length of the waterway.

Snow-filled valleys gleamed up among the Franconian forests. The outlines of the fields were never the same; now they seemed to be in turbulent movement, like waves rolling towards the shore; now they were all rococo flourishes; here they encircled a hill, there formed a great chequer-board across the landscape.

To the northwest hung a jagged range of cloud-mountain. Masses of vapour detached themselves and flowed rapidly towards us. They passed beside and below the plane, first tenuous, then denser, a tattered and fleeing rout. But what was that?

At my side, an aeroplane swelled into view, a complete machine with wings and body. Avaunt, spectre! What, here again? Still longer, still broader? Away! Blacker and broader yet, and menacingly near!

Then suddenly a gap yawned in the clouds. Bump—it had fallen and resumed its race, far away below, a poor emaciated creature, my little shadow-dog again. I felt sincerely sorry for it and yet I was a little bewildered. What a quick-change artist the thing was! Who would have believed it? I wished the woman in the fur coat had still been with me!

1st St. - lowed  
H. S. - 1st

Get sumo to C. P. Edwards Brander  
T/E Lumber to Brander

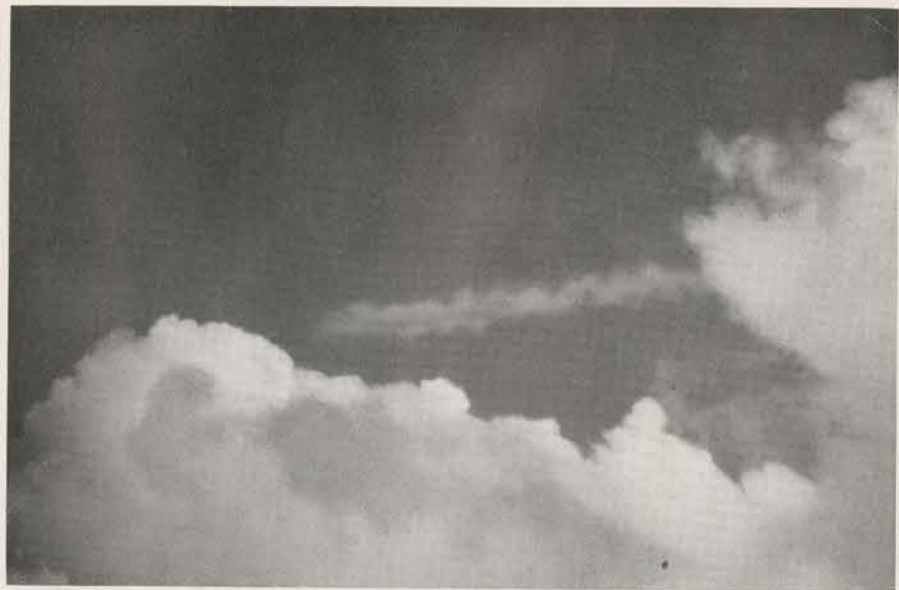
from Brander to Rome in Alps  
Smiling out of the wood!  
Stella in ways, now, 11 1960 from Brander to Rome!



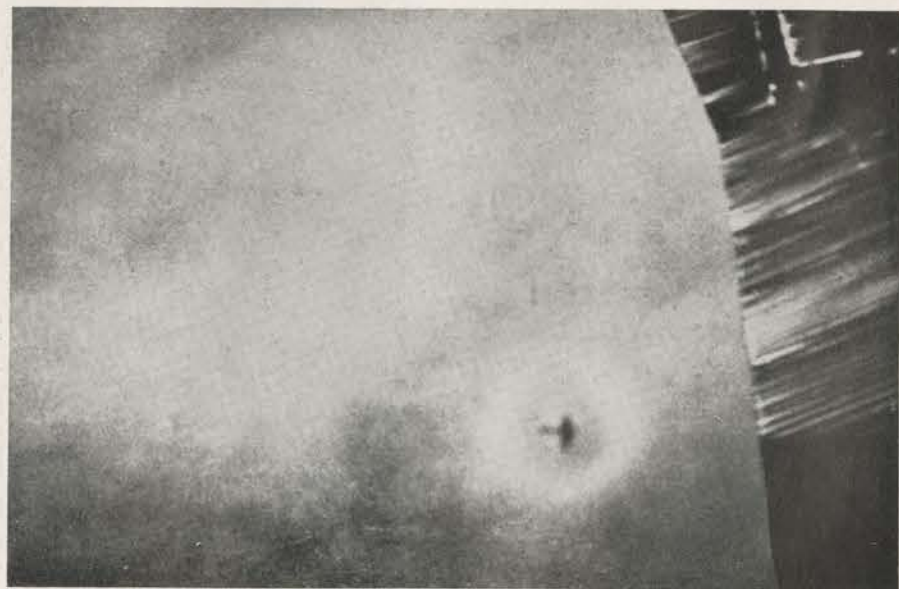
Sun reflection  
The reflection appears to be suspended in mid-air  
Photo: Peter Lautner

We were flying over Switzerland, France, Italy,  
the most glorious sight I have ever seen!





1



2

1. Artificial cloud  
2. Rainbow-coloured ring round the shadow of an aeroplane  
To the right, the wing of the plane  
Photo: Peter Lautner



Shadow of aeroplane  
above the coast of West Africa  
Photo: Dornier Metallbauten G. m. b. H.





Shadow of Zeppelin  
above palm-plantations in Egypt  
Photo: "Luftschiffbau Zeppelin"

Stewardess Therese Gauthier  
Western Air Lines Flt 635 9/20/69

# THE PLAY OF SHADOW

83

We turned away from the mists, which were moving up in close formation, and immediately my shadow-dog dropped behind, as though ashamed of his clownish tricks and acrobatic performances—no, he turned back and ran straight off towards Munich.

I watched dumbfounded. This was simply impossible! And yet I could still see him running away. This beat the whole theory of relativity!

I looked down at the earth, bewildered by these mysterious happenings. And there, a little ahead of us, was my shadow-dog, loping along with an air of hypocritical innocence, as though nothing out of the ordinary had happened.

You will probably have guessed already that the shadow making for Munich was that of another plane flying in the contrary direction, which had passed without my seeing it.

The airman has an affection for his silent shadow. He is so far removed from it that it really seems to have a separate existence. When white mist covers the earth, the shadow on the mist is the pilot's only companion; it seems to be the only living creature left in the world.

*The green woods drop away and cease to be,  
Cliff, river, field and forest melt and swim,  
The mountains soar, towns wither, hamlets flee,  
The world grows insubstantial, lifeless, dim,  
Gone is my shadow!*

Capt. W. E. Walker  
First Officer Joe Kennedy  
Stewardess Sue Phelps

NW A  
78.65 4-30-45



Miss Laureine Kalina  
5200 S. Blackstone Ave  
Chicago, Ill.

Capt. Manuel Enrile  
SER. 3 JWA

J. F. Bradshaw Capt., NWA  
J. C. Kennedy FO, NWA  
Beri Seal Stewardess



Capt. W. G. Staman  
1st Off. L. A. Shaver  
STEWARDESS ROSE MARIE HOMINDA  
Stewardess Kathleen D. Mauck

*In Flight*  
ON THE MAINLINER

Flt. 527

27 Dec 1946



Tilled fields  
Swiss landscape in the Canton of Berne, South of Huttwil, from 10,000 feet  
Photo: Ad Astra Aero

Stewardess Vicki Remy  
Western Airlines Flight 635  
9-20-69

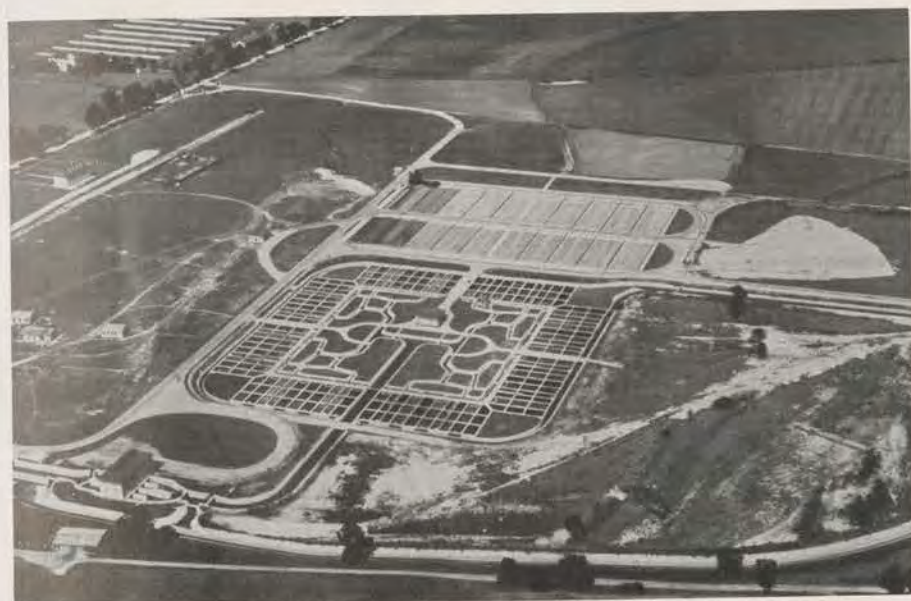




Village  
The village of Cornya Oryehovica, Bulgaria



1



2

1. Ornamental gardens at Schleissheim  
2. Waterworks at Grosslappen, Bavaria  
Seen from the air, both have the same decorative effect  
Photo: Photogrammetrie





Racing track  
The Southern loop of the Avus Bahn, Berlin, during a race. On the extreme right of the curve is von Brauchitsch and, behind him, Carracciola  
Photo: New York Times

Capt Alvin G. Orr  
Flight 508 - 26<sup>th</sup> 1947  
From Salt Lake to Chicago.

First Officer  
Noah L. Beltrami, Jr.

THE FACE OF THE EARTH

Elaine Reedy  
Flight 508 - 8/24  
Stewardess  
UAL

### A NEW VISUAL WORLD

WITH the conquest of the sky a world of new visual impressions has been revealed to us. We thought we knew the face of the earth; we thought we knew what a cool, shadowy wood looked like, a hill in the radiance of a summer morning, a lake bedded in its green banks with waves of shadow running athwart the reeds, a landscape dappled with fields of ripe corn, (gemmed with red poppies. We thought we were familiar with a river between vineyards, with the sudden intrusion of a steamboat, belching its black smoke, round a bend, breaking with its bow the towered reflection of some ruined castle. Nothing, we thought, could be more familiar to us than our home countryside, which we had explored in every nook.

We went to strange lands to find something new, to give our pampered eyes the stimulus of new impressions. We climbed the perilous flanks of great mountains to look upon far horizons as a change from the scenes that encompassed us so closely. Our desire for height was always a desire for distant scenes.

None of the organs of sense reveals to us so much of the world as the eye, and none is so greedy for novelty. But the supply of novelty seemed exhausted. Our view of the earth was indelibly engraved upon our minds; it was derived from thousands of direct visual impressions and thousands of pictorial reproductions. We might add minor details, but the general effect remained the same.

When we closed our eyes and thought of a wood, the trees grew up before our inner sight from a carpet of green moss or



yellow leaves ; we saw the brown bark of their trunks reaching to the topmost boughs that swayed in the wind. Or if we thought of a hill, the hill appeared before us, resting broad-based upon the earth, mighty, rugged, slowly tapering to its rocky summit.

We looked at everything from below upwards. It was the visual world of the plain-dweller, built up by the habits of centuries.

Now we are learning to see with the eyes of a voyager through space. The altitude of his view-point gives the visual world a new perspective.

When one looks down on the earth from above, its face is fundamentally changed, it wears a new and unfamiliar countenance. One looks down spellbound, endeavouring to find the old, well-known landmarks. There is great delight in this search, in the guesses it involves, the constant effort to decipher unaccountable features.

At the beginning of the century only a few aeronauts had the opportunity to look down on the earth from the level of the clouds, to see it as it were with the eyes of heaven, but now that great experience is enjoyed by a whole generation of airmen and airwomen.

As it floats gently along at medium height and speed, the balloon presents to the eye of its occupant a slow sequence of impressions, each clear, separate and steady, the only novelty being the vertical viewpoint. The aeroplane, however, moving faster than the birds and the winds, forces the airman to adapt himself to a new way of seeing.

It is not a matter of one view following another, as on a walking-tour ; the impressions melt into each other and form a continuous, unbroken sequence streaming past at great speed. Speed is an essential element in this new experience of the human eye. The eye has to habituate itself to receiving visual impressions at an enormously accelerated pace.

The first glance is bewildering. Everything seems to run together, to merge and flow in a confusing pattern of forms,

shadows and lines. I remember very well my sudden bewilderment when I flew for the first time over the fields of Russia round Alt-Auz. How was I ever to find my way in such a labyrinth ? The whole world seemed to have been converted into a maze. If I managed to keep my eyes on a cross-roads or the reassuring straight line of a railway embankment, a sudden turn would sweep them both away, plunging me back into utter uncertainty. At every turn of the machine, the impressions I had with such difficulty collected were scattered to the winds.

But soon the details began to fit together and form new unities. Fields became fields again, roads roads, houses houses. So that was how a wood looked from aloft—that was a village, that a solitary tree !

And at higher altitudes the eye learns to combine rapidly stretches of fields, groups of woods and villages, into a single recognizable panorama. But there is no frame to hold it : it grows and grows, and carries one's eyes away with it.

When the eye has accustomed itself to new perspectives and to the rapid sequence of visual impressions, the world takes shape again beneath the pilot—at least when he is flying at lower altitudes. It is differently formed but is none the less comprehensible.

But how it differs from the picture of the world that is still fixed in his memory. This new world we have conquered corresponds to the old, but is nowhere identical with it.

Not only does the airman's eye learn to recognize familiar things in strange forms, not only must his former visual impression of the world be supplemented with new shapes and colours, but, as he looks down from the heights, he sees things that no one has ever seen before. He beholds new regions of the earth, looks down on wild steppes, barren deserts and icefields ; his gaze penetrates into primitive forests and into the yawning craters of volcanoes.

From great heights he looks down on a world on whose surface no familiar object remains. Every individual feature



has been blotted out. Mountains are no longer mountains, forests no longer forests. The lineaments of earth are erased.

Only patches of lighter or darker shadow, of browner or greener hue, indicate that there is a landscape below him, enable him to guess at its variety. He might be flying round some alien planet.

It is then that the concept of the terrestrial globe becomes a perceptible reality.

\* \* \*

The airman has brought home a collection of novel pictures as a permanent testimony to the beauty and novelty of the realm he has invaded. The technical perfection of these pictures is only made possible by the progress of photography, which has created that valuable instrument, the modern camera.

The airman takes his photographs either vertically through a hole in his machine or diagonally over the side. The vertical exposure has the advantage of accuracy and gives, as it were, a map of reality. But the diagonal exposure covers a more extensive area and includes the horizon. Each provides a new and extraordinary picture, the air-picture of the earth.

I am concerned here only with what might be called the human values of the air-photograph, and not with its practical applications. From this point of view both types of photograph are equally important, for each has its own peculiar and surprising charm. The attraction lies in the unusual aspect of the objects presented, in the modification of their familiar forms, in the disguise, so to say, which results from the new perspective. But apart from this one takes an unconscious pleasure in seeing with the eyes of a creature free to roam in space, for that is what aviation has made of earthbound man. We enjoy in this way a heightening and expansion of our physical being.

This realm of new visions has held me in its sway from the day I first entered it. It was then my almost daily duty to take photographs over enemy territory when visibility was

favourable. Thus I began to collect air-pictures, and on looking at them I always felt anew their exciting and magical effect.

I want to give readers of this book a peep into the new world visible from the air, to give them a taste of its strangeness and beauty, without following any systematic plan other than that of securing the greatest possible variety.

I do not wish to illustrate the different species of clouds and geological formations or the various forms of human habitation; my object is simply to show the appearance of clouds, mountains, the work of men's hands and all visible things, when seen from above. In short to show how the world looks to the airman.

The reproductions are intended as examples of this great new visual experience. They rarely illustrate the text, and when they do so it is largely by accident. They stand beside it as an independent auxiliary. Their evidence of the sights seen by the airman is more convincing than any verbal description.

Some of the pictures I selected for their aesthetic value alone. Outlines seen from above acquire a purely decorative effect quite unrelated to the nature of the object. Unimportant, commonplace things give strangely artistic effects: tablecloths in a beer-garden, a cluster of empty boats on a lake, white tents in a sandy desert, drifts of unthawed snow in a wood. Dissimilar objects reveal apparent similarity: a waterworks seen from above proves as ornamental as a palace-garden.

The ornamental quality of all things is brought to light. Water and desert, ice and snow, reveal their mysterious structure. The deep relationship of all forms becomes manifest. Sandy deserts resemble the sea, ribs of stony wastes eroded by rain and storm have the same structure as plants; they look like algae or coral or ice-crystals. Sandstone hills resemble fingerprints, a silted river-bed is like the texture of a muscle, a delta like a leaf.

This visible world speaks as it were a new language, strange to us all, a language of peculiar force and impressiveness, as it were a language of signs, like that of the dumb. Its signs differ



from each other in a thousand ways—what handwriting ever resembles another?—but they represent, not ideas, but reality itself. Each time we study it we learn to understand it more fully and distinctly.

And if one calls the strange, multiform play of lines, which yields its significance to the airman's attentive eye, the world's speech to the airman, then the changing, many-toned play of colours, that offers itself for his delectation, can be regarded as the world's music.

"The secrets of the earth's crust," says Mittelholzer, "are revealed to the airman. It is as though it had a new face and man a new and more highly developed eye." And Lindbergh says that no one knows the true appearance of his native land until he has looked upon it from the air.

A famous German writer describes a flight which uplifted him above human resentments and depression, as he looked down on the German countryside: "The Germany we see from railway-carriages, that gloomy, smoky land of cement and corrugated iron, was naught but a dream! Berlin, Halle, Leipzig, were no more than little unimportant blemishes, tiny freckles on the face of the country; all the rest was solid earth, placid and lovely verdure; it looked up at me with the soft blue eyes of lakes, from the still, shining ribbons of stream and river that ran away to lose themselves in the sky—lovely and peaceful! On the horizon many delicate, cool colours merged one into the other, forming a changing harmony, and I could not tell sky from mountain, city from lake." The writer was Hermann Hesse.

The rigid shapes of the mountains are displayed in their mighty completeness, their intricate inter-relationships, only when seen from above, and so it is with the softer contours of hills and vales. One glance from an aeroplane tells the geologist more than he could learn from long hours of tedious labour down below.

In the same way the agricultural expert can tell from the contours and coloration of the fields the type of crops and



Boats on a lake  
Central Park, New York, under snow. Like a picture by some Japanese artist  
Photo: Seherl

Studs, Marion Phillips





Beer garden  
The "Abtei", Treptow, near Berlin. The white dots are tables  
Photo: Photogrammetrie



Park  
A photograph from Los Angeles that looks like an old engraving  
Photo: New York Times





Lonely house  
Lindbergh's ill-fated house at Hopewell, New Jersey  
Photo: New York Times

methods of cultivation most suited to the area over which he is flying. You have only to see a few times on air-photographs the characteristic forms of small holdings, big estates, vineyards, land reclaimed from the sea, cotton or cocoa fields, tea or rice plantations, and you will have gained a vivid appreciation which you could never acquire in any other way of the various forms of agriculture.

The student of history, flying about the world, can make comparative studies of man's development as valuable as those he finds in books and museums. So many different stages can be observed and compared—the bamboo hut on a lake side in some primitive forest and the skyscrapers of New York, the simplest form of human settlement and the inextricable mazes of stone that compose our great cities, the massive medieval castles and the far-flung fortifications of modern European naval bases, the hut of the native chief and the gardens of Versailles, the ancient irrigation system of the Nile and the latest type of waterworks.

The aeroplane has become essential for the work of archaeologists in deserts and backward countries. It saves him the time and exertion of long marches; it opens territories otherwise inaccessible. With one glance he can take in the outlines of an excavated town, obtaining as it were a complete map of the place. Hollows and undulations which would pass unnoticed at ground level give him a hint as to where his work should be carried on. The Johnson-Shippey Expedition, which flew over the mountainous deserts of Peru, was astonishingly successful; it discovered the remains of mighty buildings, towns and walls, and a series of mysterious trenches extending for miles, whose purpose and significance could hardly be guessed from the air. All these were remains of the Inca period and were discovered in 1932.

The unfamiliar is revealed. The commonplace takes on a strange aspect in the airman's world. His picture of the earth is an inexhaustible source of new discoveries and also of new mysteries.

*St. Lawrence*  
3/7/50

*Robert Hammond*  
*John Gross*  
3/7/50

*S. H. Johnson*  
3/7/50  
527 Dew-Sun



## FAR VISTAS

One of the major charms of mountaineering is that the horizon expands with each upward step, the eye sees more and more of the landscape, the climber seems to grow enormously in height. But all this is greatly intensified for the airman. He is raised above all normal elevations, vistas of incomparably vast dimension are presented to his sight, he is given as it were the eyes of an eagle.

His field of vision comprehends not only a single mountainous district, a single expanse of landscape, no, whole series of mountain ranges, landscapes stretching from sea to sea, are displayed to him simultaneously. From the height of an aeroplane, the eye achieves a comprehensiveness and unity of impression impossible from any spot on the earth's surface.

Visibility is best when one flies in clear, cold air with the sun at one's back. For instance, one can see from a little more than three thousand feet above Dunkirk the line of the English coast fifty miles away. Flying above the Baltic between Warnemünde and Gjedser, one can see simultaneously the coasts of Germany, Sweden and the Danish islands. An airman flying above Zurich at a height of ten thousand feet on an exceptionally clear day can make out the Swabian Alps to the north, the snow-capped ridges of the Vosges to the north-east, the Zugspitze to the east, the Valais Alps to the south and the summit of Mont Blanc to the south-west.

What immense vistas become visible to the airman in the clear atmosphere of the polar regions and the hot dry air over sandy deserts! Byrd tells us that, as he flew over the coast of the Southern Antarctic, he saw every hour six thousand square miles of new, unexplored land. Looking through the whirling screw of his propellor, he caught sight far away of the slate-grey flank of a magnificent mountain; another and yet another appeared above the southern horizon, till he counted fourteen new peaks never beheld before by human eye. These mountains he called the Rockefeller Range. They bar the way to a country

named Marie Byrd Land, which has never been seen from an aeroplane except on that one occasion.

On the way from Bagdad to Teheran, Mittelholzer flew over a barren stretch of desert bounded on both sides by distant snow-capped mountains. Suddenly there arose out of the infinity of snowless, red-brown desert "a sea, smooth as a mirror, a silken green in colour, with broad, white banks. It was as though a thin semi-transparent curtain had been lifted to reveal it. This was a great saline lake, a good forty-eight miles in diameter. But high above it, in supernatural grandeur, draped in a shining white garment of snow, towered a bold pyramidal peak, six thousand five hundred feet above the far-flung mountain chain to the north—the Demavend, Persia's most lofty and most beautiful mountain, radiant against a dark blue, cloudless sky."

This spectacle was witnessed by Mittelholzer at a height of nine thousand feet. "It is the most impressive and overpowering sight that earth can offer, exceeding all our concepts of space and magnitude." Thus he writes in his *Persienflug*.

Günther Plüschow's description of a flight over Tierra del Fuego has made an indelible impression on my mind. His heavily-laden machine rose lightly from the water and gained height. The land fell away below it. Not till Plüschow had reached a height of six thousand five hundred feet did he look down and about him. "Like an unimaginably beautiful dream," he writes in his book, *Silberkondor über Feuerland*, "Tierra del Fuego lay before and below me, glittering and sparkling with all its ice and snow, its glaciers and green woods, beneath an arch of cloudless blue sky."

"Yonder was the Buckland Range, and over there, as though poured from some titanic bowl, the whole length of the Agostini Fjord, glittering with marvellous colours. I could see not only the wall of glaciers in the background, but also the mighty Mount Darwin from which the glaciers fall. And there in all its grandiose and unearthly splendour was the whole stretch of the Darwin cordillera, the backbone of Tierra del

Dear O. O'Connor - Stewardess  
6/13 - 8-27-1950 -  
Wonderful having you aboard!

Capt. Mike Robinson  
1st Officer Bergmann  
2nd Officer Ray  
8-27-50

Many Days of Happy Flying  
Dobbie Stout  
Stewardess -  
8-27-50

at 6975 - 8-9-51  
Sharon Stinson Alt



Fuego, the end of the mighty ranges of the American continent, which vanish finally a little further on in the grim depths of the Antarctic.

"It is a wonderful experience when one realizes that one is looking for the first time on what has been wrapped in mystery since the beginning of time. . . .

"Once more I looked round me. I saw the Sarmiento, the Bucklands in the distance, and beyond them the gleam of the Pacific. To the east I could make out the Atlantic, and Cape Horn to the south. That day, from the height of my machine, I could see practically the whole of Tierra del Fuego."

This story of Plüschow's shows not only a great range of physical sight but also an inspiring elevation of mind.

#### THE FACE OF THE MOUNTAINS

One might be tempted to write the morphology of the earth's crust in air-photographs, so eloquently does the face of the mountains speak of age and formation, origin and future destiny. Despite all variations of form, the summits in the same range bear a family likeness, while those of different ranges are quite dissimilar. Here, abrupt, the towering lines of broken and precipitous peaks and ridges, there, the tired contours of weathered and eroded rock.

One never feels the majesty of a mountain region, the grandeur of its manifold peaks and gorges, so deeply, as when one looks down upon them from an aeroplane. For the mountaineer each ridge obscures his view of the next. He has certain joys denied of course to the airman: he hears the plash of springs, the prattle of mountain streams, the roar of waterfalls, and breathes the moist, sharp odour of moss and stone.

But even his longest view from the highest attainable spot is limited compared with that of the airman. The mountaineer sees a dumb circuit of solemn, immobile heights—a single picture. Around him lies a panorama of silent grandeur.



Cordilleras  
On the right, the Great Wall of Peru (Inca period), discovered by the Johnson-Shippee expedition, 1932  
Photo: New York Times





Junction of mountains and plain  
The Andes merge into the plateau of La Paz. Note the mountain road  
Photo: Junkers



Glacier  
The Mer de Glace, near the Dent du Géant in the French Alps, from 12,500 feet  
Photo: Ad Astra Aero





Mountain chains in mist  
The Lugano and Bergamask Alps round Lake Como  
Photo: Photogrammetrie

But for the airman the mountains glide and flow; they seem to be in titanic motion. They are alive; they open and close their ranks; they greet and beckon. Dipped in light and shadow they shift their relative stations and present the winking cups of their crystalline lakes.

When the pilot rises through the morning grey of a valley and sees the sun's ball flame suddenly up above a mountain ridge, he has a sense of beholding the dawn of creation. A flood of young light pours over the wings of his machine; peak on peak is touched with fire. Reddish mist steams up from distant valleys and disperses in the morning breeze. And the clouds of the eastern sky hang like a second mountain chain of still more fiery light above the mountains of earth.

The airman feels that he is moving above a world of light and splendour created for some heavenly festival.

The Lower Alps are veiled in mist through which rise shadowy the lines of higher peaks. Wooded heights loom out of the greyness, pale green valleys. A lake shines up, half hidden by clouds. An island set in emerald. The sun gleams and the mists disperse. The plane wings its way southward through broad valleys.

It crosses the bed of the Inn, which lies there half choked with yellow sandbanks like the texture of a muscle. A whitish waterway winds sinuously between. A dam, its water green as glass. Valleys open to right and left, revealing deep vistas, others shine with the bright green of meadows among the shadows of distant mountains. High above us, on both sides, shine the snowy peaks of the Zillertaler Alps.

It is a strange feeling to fly through a valley with mountainous cliffs on either hand. Far below, at the foot of the crags, a small pale shadow flies with you. Gorges full of snow. Zigzag paths that rise, clearly discernible, through the woods. Vales dotted with cottage roofs. Here the mountains are plunged in shadow, there they climb into the light. And yonder, high above the peaks with their winking snows, great white clouds march slowly and solemnly through the blue sky.



A town in the valley, Bozen, with fields scattered round it. The thin line of the railway. A gentle upland curves out of the valley with meadow-green slopes where cows are grazing. It is the vale of the Etsch. The glaciers of the Ortler and the Adamello glitter behind the ridges to the right.

(There is the Lake of Garda, a patch of deep blue on the floor of the earth, its banks encircled with emerald-green. Little towns nestle among the hills around. There are boats in the harbour. We fly straight across the lake. The sun weaves its net of light over the water, fine-meshed, shining like silk, and the white sails of yachts are caught in it like butterflies. Little emerald islands in the deep blue.) On the right bank, Gardone, with D'Annunzio's house on the hillside and a big ship in the harbour—his private warship. Suddenly the mountains are no more. The lake dims and is past. A flat plain, patterned with winding lines of fields and white ribbons of highroad—the plain of the Po.

And now another flight over the Alps, a very different one. The island of Venice merges into the changing colours of the lagoons. The bright, broad sandy bed of the Piave bisects the green country side, which is cut up into thousands and thousands of little fields, each hedged round with olive trees. The mountains are almost hidden in mist, snow-peaks and cloud-peaks alike hardly distinguishable. One looks back: the yellow windings of the Piave seem to extend for ever on their way to the sea.

Little clouds lie on the hill-tops below. The Piave winds its way into a broad valley which separates the Lower Alps from the Dolomites. In one corner is Belluno. Now the mountains sweep grandly upwards. Vapours rise from every valley. Festoons of cloud hang round the slopes, but the summits are free.

Above, shining white cloud-masses pile up. They seem immobile, but suddenly their white pinnacles have moved; they lean towards each other, grow into each other.

A flock of shining glaciers round the Marmolata. On that

flat, grey plateau of rock with the sharply indented peaks around it, is the glacier of Monte Martino. We fly towards it at ten thousand feet. Snowy summits shine to our left from the Ortler and Oetzaler Alps, and on our right the chain of the Hohe Tauern Alps sweeps in a great curve into the distance.

We see the clear jagged lines of the Hochfeiler, the Gross Venediger and the Gross Glockner. The Gross Venediger has a fringe of white cloud round its towering head, like a condor. Two grey, crevassed glaciers drop with the same bold sweep, side by side, from the Gross Löffler. The Olperer soars solitary with its flat glaciated crown.

From the Stubaier Alps the Zuckerhütl and Schral-Kegel glitter with their blanket of glaciers. Below us lies the Brenner, the Wipp Tal yawns wide, leading to the broad Inn-Tal. Innsbruck lies at their junction. The Zugspitze rises up.

The Karwendels and the Bavarian Alps lie between us and the plains, but at this height one sees the flat country far away beyond them. Many lakes gleam beneath us, Lake Walschen is deep blue, Lake Kochel light green. In the plain are Lake Starnberg and Lake Ammer, and far away to the right Lake Chiem. The sand-blocked Isar sweeps in a yellow curve from the mountains into the land. That white patch of mist in the distance is Munich.

We look down on Tölz and Lake Tegern. We have reached the end of the mountains, and the end of the clouds also. They drop behind, piled above the Lower Alps, as though they felt some kinship with their rocky brethren down there on the ground.

We come down lower and lower, feeling disconsolate, because all that splendour lies behind us. (We feel degraded to the status of earth-dwellers again.) That thin, pale waterway, the colour of café-au-lait, swells slowly and becomes the proud Isar. . . .

Mittelholzer has described with the eye of an artist the aerial view of the panorama of the Alps. It is a scene of incomparable beauty and richness, full of new and astonishing



sights. Even one who is intimately familiar with the Alps from many climbing expeditions would have to confess that he had never seen them in such fullness and variety, in such perfection of picturesque formation, as when he saw them from the air.

Who was the first to fly over the Alps? Who claims our gratitude as the conqueror of this magical world?

First we must remember that it was not till the 17th December, 1903, that Orville Wright managed to fly for twelve seconds in a motor-driven machine. And on the 8th December, 1908, he succeeded in setting up an altitude record of three hundred and eighty feet.

The Frenchman Latham reached a height of three thousand feet on the 7th January, 1910, and yet on the 23rd September of the same year a man flew over the Alps at a height of seven thousand five hundred feet.

The young Peruvian, Chavez, took off from Brigue about mid-day. The few friends who had accompanied him to the starting place looked anxiously after him. He climbed up in three great spirals over the Rhone valley, then disappeared behind the Kaltwasser Glacier.

The guests at the Belle Vue Hotel, high up above Brigue, searched the Rosswald ridge in feverish anxiety with their field-glasses and opera-glasses, waiting for his machine to come in sight. In a few minutes he had risen to the height of the Simplon and for a moment they caught sight of him. He flew on towards the Gondo gorge and dropped down towards the Simplon hospice, as though intending to land. The monks hurried out on to the road, scarce able to believe that a man was actually flying over their solitudes.

Now he had reached the height of the pass, overcoming the vortices and down draughts above the deep chasms. What a struggle it must have cost him! Now he had passed the highest point and again glaciated slopes and steep defiles extended below him. He crossed the Gadenhorn and appeared above the glaciers of the Fletschhorn. Observers on the ground

Best wishes to Ethel Sale. I am  
most proud to be among your collection  
of names. 2nd off. W. R. Andrews  
UAC Los Angeles

First Officer John J. McManis - Visited the Lewis  
You have flown with some of the finest pilots ever - your  
aerograph collection is priceless! Notes to have you  
again on UAC - McManis Capt Los Angeles 12-17-64



Mountains in cloud  
Mountain-chain damming back a sea of cloud. Photographed on a flight from Munich to Milan  
Photo: Ad Astra Aero





Mountain lake  
Lake Klöntal, Switzerland, from 11,000 feet. Left foreground, a spur of the Glärnisch glacier  
Photo: Ad Astra Aero



Snowy peak  
The summit of Mont Blanc (15,782 feet) from the South. Altitude of plane, about 16,000 feet  
Photo: Ad Astra Aero



Mr. E. M. Dingley  
1st stews Dean of Mission " Wonderful flying with  
2nd stews Virginia Maryland you again



Cloud-capped peak  
The snowy summit of Fuji-Yama, Japan (12,370 feet). In front, wing of plane  
Photo: Dornier Metallbauteil G. m. b. H.

saw his right wing caught by violent gusts, saw the machine waver, fall and right itself above the moraine of Rossboden. The villagers of Gondo stared after him in consternation as he flew on across the yawning chasm of the valley of the Toce.

Now he was over the outlying houses of Domo d'Ossola. The machine dropped rapidly from seven thousand feet to three thousand three hundred, was caught in strong air currents and driven towards the inaccessible crags of the Pizzo d'Albione. Chavez escaped this last danger, descended above Domo d'Ossola and was nearing the ground, watched by many hundreds of people, who were already cheering joyously and waving their hats and handkerchiefs. Then suddenly his machine crashed.

He died a few days later. We shall never know the cause of the accident. Perhaps that appalling struggle against cold and storm, squalls, eddies and clouds, had exhausted his strength and at the last moment his senses left him. His passage across the Alps took forty-two minutes.

To-day aeroplanes cross the Alps daily on a regular service. Thousands of passengers have felt the awe and beauty of trans-alpine flight. The danger is very much reduced by the great altitude to which these passenger-planes attain. In this way the strong up and down draughts which dominate the air-strata immediately over the mountains have little effect on the machine. I cannot remember a single serious accident caused by an emergency landing in the Alps since this service began some years ago.

The skill and sureness with which pilots have learned to fly through gorges and round peaks are illustrated by the performances of a man like Udet in the great Alpine films. It makes one's heart beat fast to see him land his little machine on snow-covered slopes and beside glacier-filled valleys.

The airman who flies through mountain defiles, swooping between walls of rock and circling round jagged pinnacles, must accept the inevitable dangers of such flights. Here is an example from the rich experiences of Mittelholzer.

Such a short trip -  
just over a year previous  
Jan. 1896 (676-25-50)



As a young pilot, he was flying home from Italy in a small, fast plane, and set out to cross a cloud-covered mountain-range at a great height. Believing that the masses of cloud below him were not very thick, and that by dropping through them he would find himself somewhere above the valley of the Linth, he planed down and plunged into the clouds.

The altimeter showed he had dropped from nearly fifteen thousand feet to about ten thousand. Now it began to snow and all round him was the blackness of night. "By this time," he says, "my sense of equilibrium had deserted me. I staggered along between earth and sky like a drunken man. Then of a sudden a dark shape loomed up in front of me and was gone. A black wall of rock flitted past, conjured as it were by ghostly hands out of the greyness. In a split second I realized clearly that there could be only one victor in this fight—the omnipotent monarch, Death. There is no hope for the pilot among the whirls of snow and fog in the mountain altitudes.

"Suddenly a shining white expanse flashed towards me out of the grey mists. Instinctively I drew back the control-column. A terrible crash shook me to the marrow, and was succeeded by the silence of death! I do not know to this day how long I lay there unconscious. When I came to myself I thought I must be dreaming. How came I to be lying in five feet of snow? Had I not been, only a few minutes before, above the blooming garden of Italy? Shaking off the loose snow, I looked out in amazement from the deep hole I was in at the grey unfriendly world about me. Then I saw the wreckage of my plane on a shelving ledge of snow about three hundred and fifty feet above me."

He was saved by a miracle. His right knee was very painful and blood was dripping from his forehead. To escape from the icy night he lay down on his back, and slid down the slope, propelling himself with his hands. He heard a dull roar above him, the whole expanse was in motion: the masses of snow rushed downward faster and faster, bearing him towards the valley. As he hurtled along he saw a weather-beaten pine

tree in his path; he clung to it with all his might and was thus saved a second time. The track of the avalanche was as flat as though a roller had been passed over it, and he slid down it without further difficulty.

But the game is worth the danger. A flight across high mountain ranges is one of the most inspiring things the airman can experience.

"We value life according to its fullness," writes Professor Kempf, Mittelholzer's friend and companion on many expeditions. "A flight high above the Alps comes as a revelation to one's soul. One can scarcely believe the evidence of one's senses, so great, so overpowering, are the forms of rock, ice and snow that present themselves. On all sides shape on shape, each more impressive and magnificent than the last. They form in ranks and files, and speak to us in their stoney language. Here and there a monster stands apart, towering alone, unique and aloof: such is the Matterhorn! Sinister, hostile, menacing, it stands, covered with the scars of deep tempest wounds, seared by the fiery stabs of lightning . . ."

The giant of the mountains gains form and individuality, when seen as a whole by the eye of the airman.

There a glacier hurls itself in a mighty sweep toward the depths, a stream of ice bursting forth from the night of the mountains, covered with a delicate network of wave-like rills and runlets, and set in dark moraines. . . .

But there are still terrestrial mountains which have resisted the assaults of the airman. Sir Alan Cobham, knighted for his deeds in the air—as the Spanish pilot Franco was made Marquis of Palos, and the Italian de Pinedo promoted to the rank of general—set out from Calcutta to fly over the Himalayas. But he reached only sixteen thousand five hundred feet. Then he was blinded by clouds and fog.

The flight across another of the earth's giant ranges is for ever connected with the name of Günther Plüschow, who was killed two years later on one of his air-expeditions over Patagonia.



He started in a seaplane from Porvinir on the coast of Chili, ascended rapidly and found himself above the mountains at a height of eight thousand feet. The whole of the Darwin cordillera, with the Valdivia and Alvear Ranges lay below him in the light of the westering sun. "It sparkled and shone till it pained our eyes to look down. We saw what no mortal eye had ever seen before!

"Ice, ice and still more ice, towering in steep pinnacles towards the sky; ice dropping silver-bright on every hand into the valley; still dropping, still shining, when these ice-rivers had run far past the limits of eternal snow, marked clearly on the mountain-sides at about three thousand five hundred feet; falling silently through the forests to pour from the cliffs in great cataracts into the sea."

Drunk with so much beauty, Plüschow tried to cross the Valdivia chain, but with great suddenness thick masses of cloud covered the sky. Isolated snowy peaks, caught by the rays of the evening sun, shone out above the cloud. The plane was rocking badly, and the air grew icy cold. Then he caught sight of a gap in the blanket of cloud, and saw blue water shining up from the depths. "Before this welcome aperture in the clouds could close, I had switched off the engine and was diving like a condor, in steep spirals, at a terrifying speed, towards the ground."

Mittelholzer's conquest of the giant crater of Kilimanjaro, the highest mountain of Africa, will live in the history of flight, as his description of it will survive in literature.

I will only quote one passage which expresses the deep joy and satisfaction the airman feels in the novelty of his experiences.

"The Athi plateau falls quickly away below us," he says in his *Kilimandjaroflug*. "We pass the shining blueness of the salt lakes, Amboseli and Lopinya. Now we come into the moist region of Kilimanjaro, clearly shown by the undergrowth and woods beneath us. On our starboard the volcanoes Erok and Longido shrink to small insignificant hills, while above our heads Kibo still holds its immaculate shield of ice, white and



Crater  
The extinct crater of El Misti (19,680 feet), Peru, from 23,000 feet. Discovered by the Johnson-Shippee expedition  
Photo: New York Times





Edge of crater  
Side view of the crater of El Misti  
Photo: Bild-Flug G. m. b. H.



Peninsula  
Wasserburg with the old castle on the North-east shore of Lake Constance  
Photo: Photogrammetrie



(THRU NDH)

Arctic Berg. Flight 2  
PFA Shevaders Tehran - New Delhi

M. Loder. FLIGHT 2. K. L. M. N. A. C. J. K. L. M. N. A. C.



Landscape with lakes  
Regatta at Kagerplassen, Holland  
Photo: K. L. M.

Alvares - Barbara Jones

1 cm.

G. Aguilero. PFA P. N. S. E. R. FL 2/5/1940  
No 3.0.1 m. (K. L. M. N. A. C.)  
K. L. M. N. A. C. PFA S. E. R.

# THE FACE OF THE MOUNTAINS

123

shining in the dark blue, cloudless sky. About eight-thirty I catch sight, beyond the concave glaciated cap that crowns the east flank of Kibo, of the sharp south-western ridge of the mountain, falling in sheer, rocky precipices to the crater. The highest point of this ridge proves to be nineteen thousand eight hundred and thirty feet. In the centre of the ice-cap, which is about three to three and a half miles across, we see the outer ring of the old extinct crater, with its sharp edges of ice and rock. Gradually this ring deepens to a titanic arena, and at the bottom lies a mighty depression about a mile and a half in diameter. It is like the gigantic eye of some legendary monster of long past ages. In the middle is a regular geometrical shape, composed of identical ellipses which, as we rise higher, expand into concentric circles; here at our feet, covered with layers of snow and ice, is the topmost peak of the Dark Continent.

"I have often looked down from an aeroplane on things never before seen by mortal eye, and yet have felt no particular emotion. New experiences are all part of the airman's daily round. But as I looked down that day, from a height never before attained, on the fantastic shapes of this mighty peak, and watched it revealing its secrets to me, one by one, the joy of success, the pride of discovery, flowed in a warm stream through my veins.

"The *Switzerland* roared over Kibo at twenty-one thousand feet. Just over the bottomless mouth of the crater we were seized by air-currents, and I had to hang on tight to prevent the machine being capsized. For half an hour we flew in great circles round and over Kibo, while I exposed hundreds of feet of film. Three great rivers of ice, the Credner, Drygalski, and Penk glaciers flow for more than four thousand feet down the western side to plough deep into the grey lava of the slopes."

This flight over an African volcano is an example of the airman's way of exploring the world. Later I shall give examples of flights over primitive forests, steppes and polar ice-fields.

For the first time I have seen the Dark Continent from the air. The view is simply magnificent. The top of the mountain is a perfect circle, and the surrounding area is a vast, flat plain. The entire scene is a masterpiece of nature's artistry.



I would add that the treacherous spirits of volcanic craters cannot always be approached so safely. Sir Alan Cobham and his passenger were nearly killed on a flight over Vesuvius. The machine was caught in masses of belching smoke and sucked hundreds of feet by the down-draught into the poisonous gases that poured from the crater. Only the masterly skill of a Cobham could have saved the machine from crashing. Both occupants escaped from the peril of imminent death with no more than violent headaches and choking coughs.

## SEAS AND ICE-SEAS

As the airman flies over the sea at a great height, he sees the wide expanse of water below him as something solid, immobile, covered by a delicate pattern. A flood of molten metal seems to have been poured out and to have set in fine wavy lines. It is like a gigantic plate of dull silver, wrought with a pattern of ridges and depressions like some article for table use. The markings are regular and yet show slight dissimilarities like work from the hands of a craftsman. Seen from these heights, the sea reveals at a glance a formation it has otherwise kept hidden from us.

Its coloration changes as the colours change in the sky, but the exhalations from the water are so dense that every colour is softened by a lighter or deeper grey.

If the airman comes down lower, the sea awakes from its immobility and assumes more or less mobile forms according to the strength of the wind. The regularity of the pattern is now lost. The ridges and depressions broaden and deepen and are filled with heavier shadows. Soon their firm outlines dissolve, crinkle and break in foam and the grey-green mobile expanse is transformed into the restless, surging ocean, that rears up in showers of spray, lapses and breaks. Once more the sea is a wild chaos where the eye finds no peaceful spot—the sea the sailor knows. The airman is free from its domination, and looks down with a feeling of thankfulness that he

Capt. O.N.F. Cobham  
UAT Trip 834 - Sept 14-60  
1st off G.C. Fick  
F/E J.V. Gifford  
Have a look UAT  
Wendy trip - 1st  
Stewardess 34  
Mrs. S. Penney

Capt. L. Friedman  
F/E P. J. G. J.

FRID 930 STOCKHOLM - HELSINKI  
16/9 1960

can wing his way across it independent, unhindered, ungoverned by its tides.

To a man flying along the coast variations in the depth of the sea are plainly shown by the varying hues of the water, which grows lighter as the depth decreases. I have seen the coasts of Italy surrounded by an irregular fringe of pure emerald green, beyond which lay the darker green and mauve of deep water.

The pilot can see submerged reefs and sandbanks below the surface and observes the earlier forms of coasts and islands, before the constant hammer-blows of the sea had eaten them away and hidden the débris beneath its flood.

If the conquest of the mountains was a matter of altitude, the conquest of the sea was a matter of range. Many struggles and sacrifices were required before the oceans of the world had all been conquered.

It was not till 1908 that a man succeeded in remaining in the air for half an hour at a stretch, yet scarcely a year later, on the 25th July, 1909, Louis Blériot flew across the English Channel in thirty-two minutes.

The story of the first cross-Channel flight is like a chapter from a modern Iliad. Three famous heroes of the air had encamped on the French coast not far from Calais—Latham, the holder of the 1909 record, Count de Lambert and Blériot. Each watched the other suspiciously and made his preparations in secret. Latham had already made two attempts, and on each occasion had fallen into the sea a few miles out and been picked up by ships that hurried to his rescue. Blériot had had both his feet injured by his engine catching fire, and was hobbling about on crutches. Storms and cloud made it impossible to start. Then, on the night of the 24th to the 25th July, the wind suddenly dropped. While Latham and Count de Lambert were asleep, Blériot made ready to start. At 4.15 a.m. his friend Le Blanc signalled from the dunes the first rays of dawn. He took off immediately. The noise of his engine awakened his rivals, but they were too late. In thirty-two minutes Blériot

P/H Eva Sjöstedt

H. S. G. G. G.

Fly KLM!  
H. Halling  
Capt. G. J. G.  
P/HENS.  
1st off

Bob Hooper  
Stewardess  
Hen. L. M. L.  
PARSER

A/H Ingeborg Mårtensson

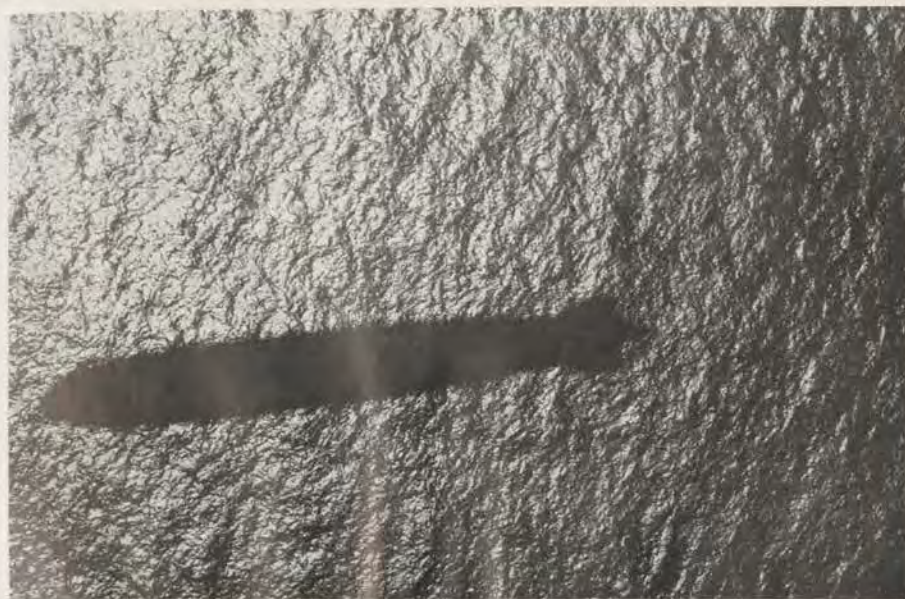


had crossed the Channel at a height of two hundred and forty to two hundred and eighty feet. His wife had crossed on the destroyer *Escopette* and was awaiting him. His friend Fontaine signalled the site of the landing-place on the cliffs of Dover by waving a flag. A monument to Blériot was erected later on this spot. He was received in London and Paris with almost royal honours. Friends who for years had regarded him as a fool, and an unlucky one at that, showered congratulations upon him. He had built machine after machine, only to see them destroyed, and had spent more than three-quarters of a million francs on his attempts to fly, so that he was deeply in debt. He was made a Knight of the Legion of Honour, and quickly amassed a fortune by manufacturing aeroplanes.

Later he wrote of his flight: "The weather was bad and I did not know whether to start or not. But I had to go or my friend and rival, Latham, would have got there first. I had been waiting four days. There was nothing for it but to make the attempt. . . . I covered twenty-two and three-quarter miles in thirty-two minutes. Everything went smoothly and easily, but that flight, which seems so simple to-day, cost me a great deal of anxiety."

When Roland Garros landed in a stubble-field near an Arab camp in Tunis on the 23rd September, 1913, he had crossed the Mediterranean in eight hours and performed the most widely acclaimed flying-feat of the last years before the war. The Atlantic was not crossed until after hostilities had ceased. Supported by the American navy, a big seaplane under the command of Lieutenant Read flew from Newfoundland via the Azores to Lisbon, starting on the 16th May, 1919, and arriving on the 27th.

Read wrote to a friend after his flight: "Few people will realize that the first sea-voyage across the Atlantic from Europe to America was much more difficult than our first flight in the contrary direction. Columbus wanted to convince the world of the truth of his beliefs. But we knew where we were going. He was alone; we were supported by all the experts of the army



1

Capt. Guy E. Cassin  
1<sup>st</sup> off J. W. Peterson  
2<sup>nd</sup> off John W. Schurz  
Stewardess Miss Thye  
Stewardess E. Rourke

2

## Ornaments of the sea

1. Shadow of a Zeppelin over the equator

Photo: "Luftschiffbau Zeppelin"

2. The end of the mole at Zeebruges

Brigitte M. M. M.  
airposters

OSCO-STOCKHOLM

D. D. D.  
4000-5000

OSCO-STOCKHOLM

Stylian  
H. H. H.  
400-500

from  
Cabo-  
to stock-  
-holm  
Sweden



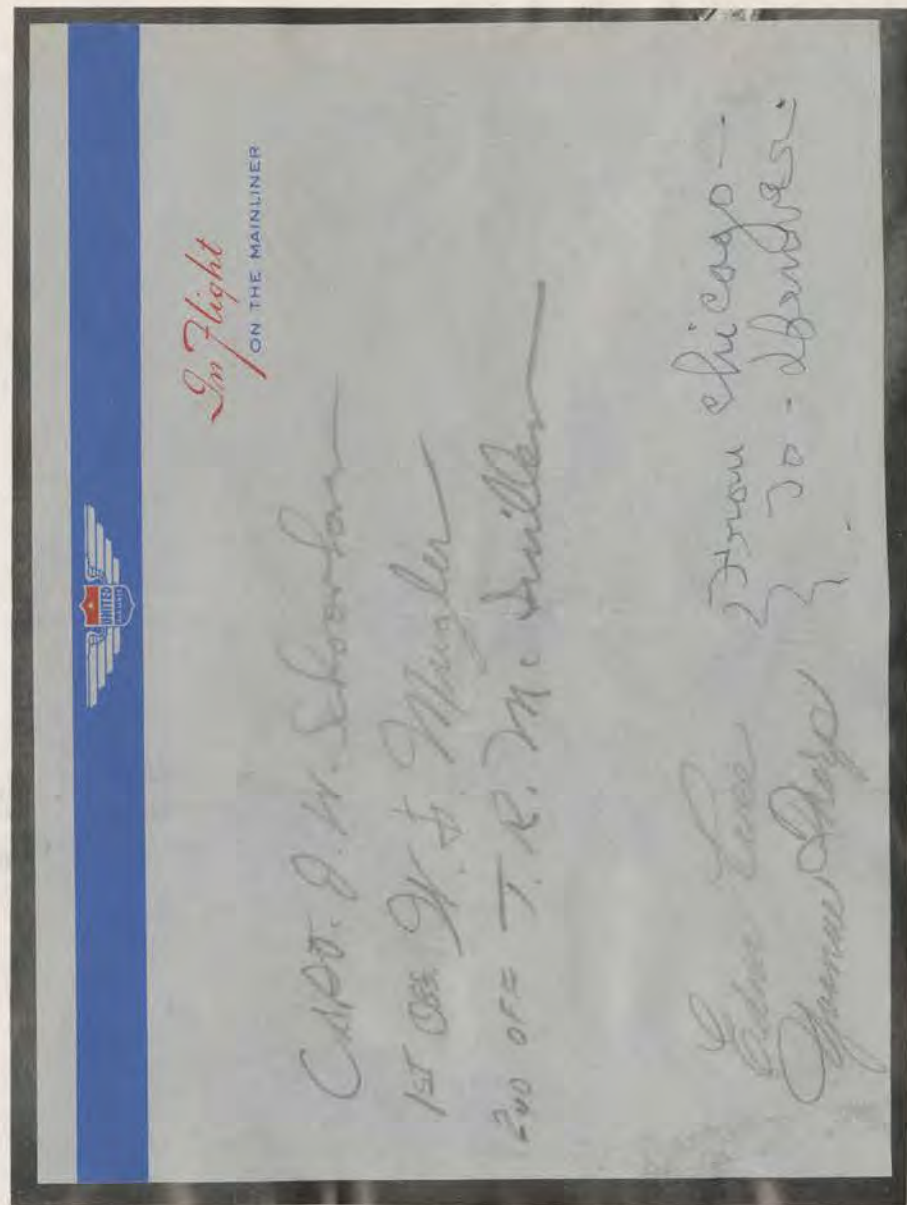


Sailing-ship at sea  
Photo: "Luftschiffbau Zeppelin"



Wakes of destroyers eluding an attack





A disappearing island  
Southern end of the island of Hiddensee, near Rügen (Baltic Sea). From the air the erosions are clearly visible under the water. The remains of the island are protected by "erib-dams"  
Photo: Photogrammetric

and navy. He had to hold out for seventy days, we for only twelve. His crew rebelled against the thought of going on; ours against the thought of turning back."

The same year two officers of the British Royal Air Force, Alcock and Whitton-Brown, made the first non-stop flight across the North Atlantic. Then followed the famous flight of the English airship R.34 under Scott, and that of the German Zeppelin under Dr. Eckener. Lindbergh's flight from New York to Paris on the 20th and 21st May, 1927, was an unparalleled triumph for the pilot and a great victory for the cause of aviation.

Among many later flights by airmen of all nations who have subjugated all the seas of the world, that of the young von Gronau and that of von Hünefeld and his companions in the *Bremen* are extremely interesting. Their reports, with those of Lindbergh and Byrd, provide the most vivid and pictorial accounts of man's first great transoceanic flights.

Despite his exertions at the storm-buffed wheel, Köhl lived through every moment of his flight with the greatest intensity. "As we wound our way through mountains of cloud, gaps suddenly opened beneath us, affording a glimpse of the expanse of water below the clouds. How different were now the dancing waves of the Atlantic. An endless succession of great waves tipped with spray rolled on before the wind. . . . I could not have imagined in the wildest flights of fancy the sea so tossed and agitated by the storm. Stirred to its depths, it hurled spurting tongues of spray towards us, ravening for new victims, while we, a tiny living thing between sea and sky, battled desperately for our lives. Every joint of our aeroplane groaned with the strain, the wings swung and bent, the rudder was battered by blows of inconceivable violence. Deep valleys were succeeded by rolling mountains of water whose peaks broke in a welter of white spume."

The ocean has added many dangers and adventures to the airman's world. Pilots have often been forced to come down on the water when heavy seas were running, and have



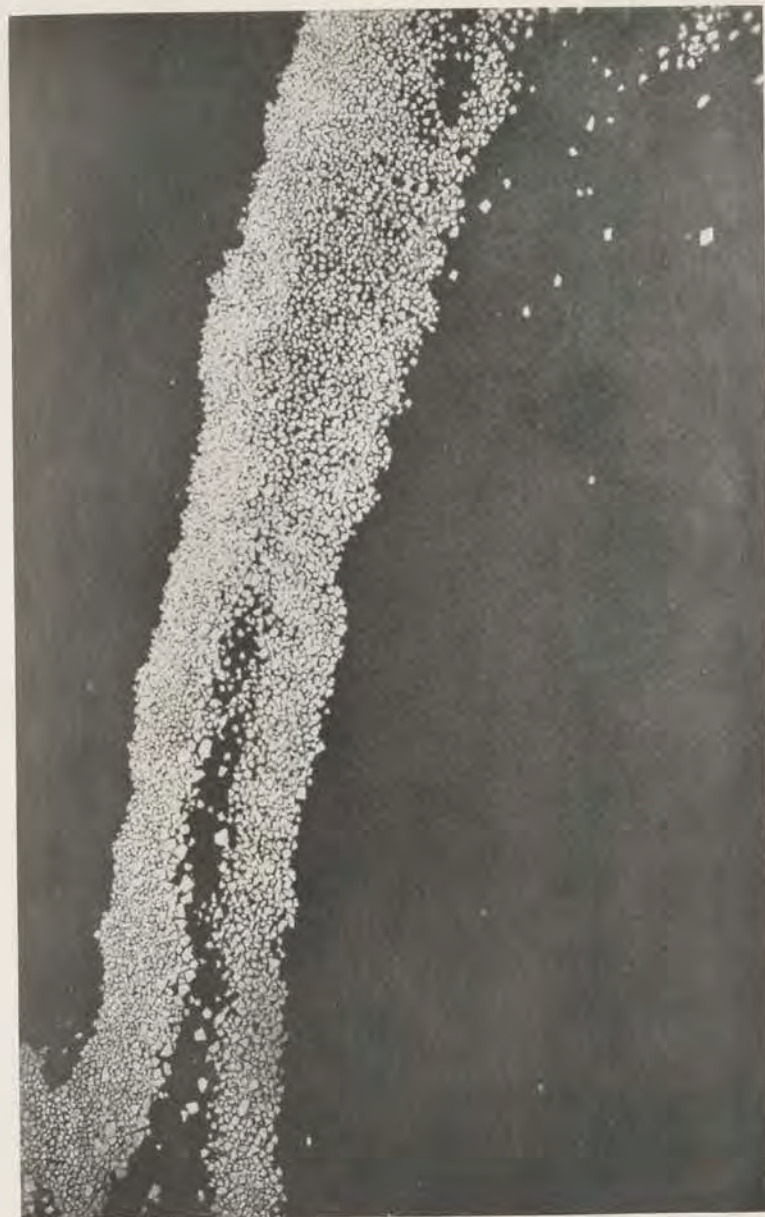
been tossed about for days at a time before being rescued by ships.

Not all have been so lucky as the two German airmen, Rodi and Johannsen, who, with the Portuguese, Veida, were rescued by the Norwegian boat *Balmoira* when drifting on the wings of their plane eighty miles from the coast of Newfoundland. They had left their starting point one hundred and fifty-eight hours before.

Byrd's great transatlantic flight, which he performed a few weeks after Lindbergh's triumph in 1927, accompanied by the experienced pilots Balchen, Acosta and Noville nearly ended in disaster. After starting from New York, he had covered the whole distance across the Atlantic and was in sight of the French coast, steering towards Paris, when suddenly a thick fog blew up. The four men hoped to reach their destination with the help of an earth-induction compass. What they took for the flares of Le Bourget in the distance was a lighthouse on the coast sending its periodic gleam across the stormy sea.

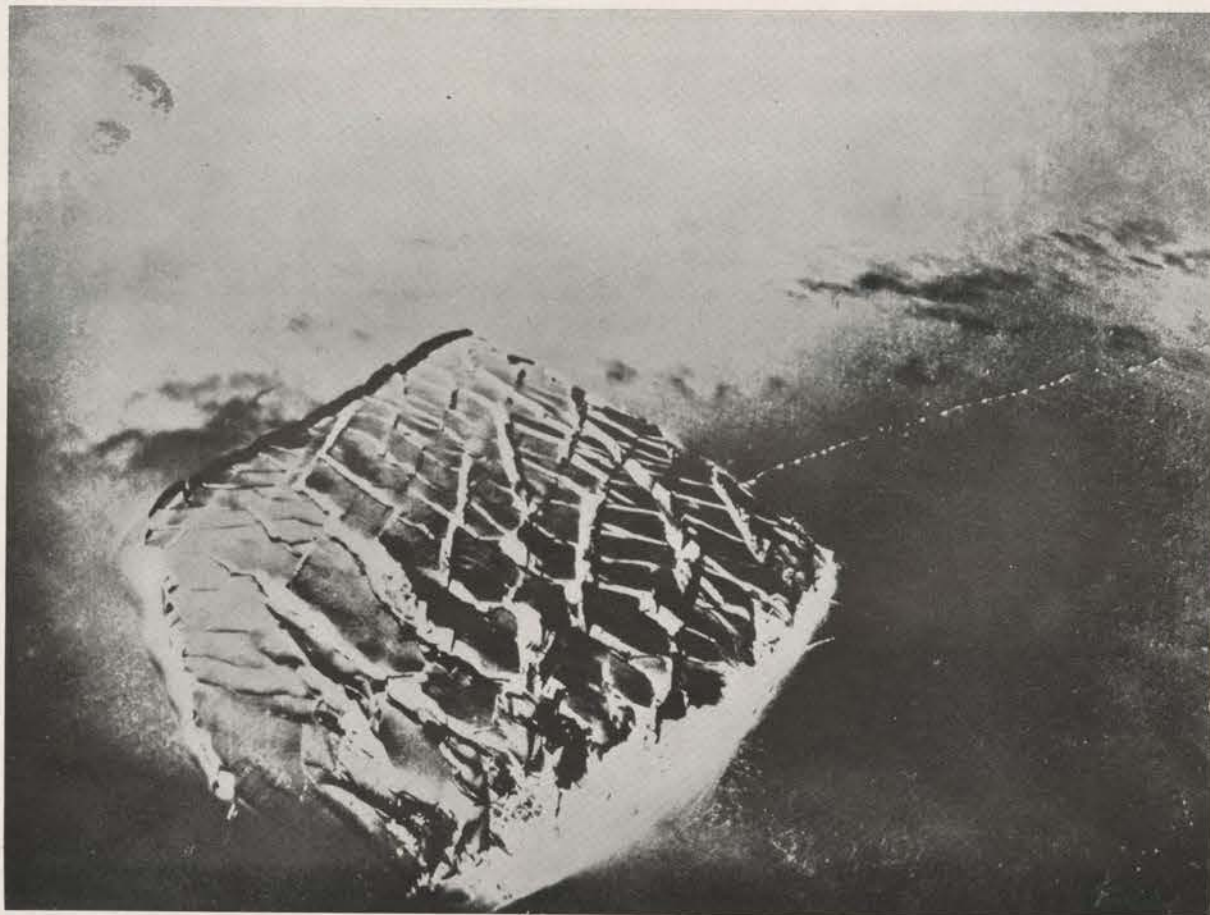
The compass was inaccurate and had led them round in a circle. Once more they set their course for Paris through pitch blackness and a roaring storm. They had almost reached their goal—the engines of the *America* were already audible to listeners at Le Bourget—when Byrd realized that to land in the fog on such a stormy night would endanger not only himself and his comrades but the lives of the people waiting to welcome him at the aerodrome. Practically at his destination, he turned back and flew to the coast to come down on the water. It seemed to him safer to do this than to land in the darkness on unfamiliar ground.

He tells us in his book *Skyward*: "It meant that even should we find water we could not be certain of landing without disaster"—like Lindbergh, Byrd was flying the Atlantic in a land-machine—"because I never heard of anyone landing in the water when it was pitch dark and when the water could not be seen. We could not even be certain of landing a great plane like ours safely in the water in the daytime."



Milky way of drifting ice-floes  
From Admiral Byrd's "Little America", by permission of G. P. Putnam's Sons





Iceberg

From Admiral Byrd's "Little America", by permission of G. P. Putnam's Sons

J. H. Harrison Captain  
 E. Clyde Havens 1st Officer  
 W. C. Coker 2nd Officer  
 H. C. Meyer Engr. Officer  
 Maria T. Hendricks (Stewardess)

Roy Pe Don (Purser)

Margit B. Giverny

POST CARD

Hard Reminders  
 Alice Winter

PAN AMERICAN  
 WORLD'S MOST EXPERIENCED AIRLINE  
 Clipper Trade-Mark Reg. U.S. Pat. Off.

Bangkok-Hong Kong  
 33,000' 600 MPH  
 2 hrs. 15 mins.

Good Luck  
 on many more flights  
 Wonderful having  
 you with us  
 Douglas DC-8C Jet Clippers, together with Boeing  
 Intercontinentals, give Pan Am the world's largest  
 over-ocean jet fleet

Photo: Associated Press

ed by snowdrifts. Supplies







Mountain road blocked by snow  
The Oberjoch road in Allgäu  
Photo: Bayerisches Kriegsarchiv

Byrd and his companions wanted to descend as near the coast as possible, so that they should not have too far to swim and also because they hoped to salvage the aeroplane. But if they came down too near the shore, there was the danger that they might strike a rock in the darkness. About thirty yards from land, Byrd threw down flares. They flamed up but seemed only to make yellow-red spots in the inky blackness of the nocturnal sea. He hoped that if he went lower the flares would enable him to estimate his distance from the water, but in vain. The four men stared down attentively through the night, but they could not make out the sea. There was no help for it, they had to take the risk of a blind landing. Would the under-carriage stand the impact of the water? The wheels touched the surface, and immediately the under-carriage was swept away as though shaved off with a knife, though the airmen were not conscious of any particular shock. Their experience shows the effect of contact with water at high speeds. Not one of them had bargained on the complete loss of the under-carriage.

Byrd received a heavy blow near the heart and was thrown into the water. He heard Noville calling to him. That was the only sound in a weird silence, for they could not hear the roar of the sea; for forty-two hours the three engines of the plane had droned in their ears "like the drums of hell". Byrd saw Noville climb out of the window, and the aeroplane quickly filled with water. He shouted to him, but Noville did not seem to hear and went on shouting Byrd's name. Byrd was afraid he had lost his reason. Then he saw Balchen struggling with difficulty from the pilot's seat. Balchen did not answer Byrd's shouts, but kept asking whether Byrd was injured. Full of anxiety for Acosta, Byrd dived into the sinking cockpit, but there was no one there.

Then he saw Acosta swimming towards the left wing, the front edge of which was already under water. He called to him, but Acosta made no reply beyond shouting incoherently. All Byrd could make out was that Acosta was in some way hurt. It seemed to Byrd uncanny to be drifting thus with three

CAPT. J. H. Allan  
1<sup>ST</sup> OFF. E. Willis  
2<sup>ND</sup> OFF. M. E. Pool

TRIP 834 OCT 5 '61  
SEATTLE TO CHICAGO



companions through the nocturnal sea, unable to make them hear, though they were quite close to him. He could only assume that all three had gone deaf. But, after all, the main thing was that they had escaped with their lives.

They climbed, panting and groaning, on to the wet wing. Noville ripped open the fabric, got out the rubber boat and began to inflate it. But he slipped on the wing and fell.

At last Byrd solved the riddle of why his comrades had failed to hear him. They were temporarily deaf from the roar of the engines. Byrd's earcaps had saved his hearing. Now they congratulated each other on the fact that they were still alive, grasped the straps and rowed through the darkness towards the shore.

Airships and aeroplanes have flown over the North and South Poles and brought back photographs of the strange and fascinating polar regions.

They have fulfilled the profound aspiration of Fritjof Nansen, who so often longed for wings to rise above the barriers of eternal ice and fly to the North Pole. Peary, travelling with dog sleighs, was the first to get there. That was in 1909.

Andree's polar expedition, undertaken in 1897 in the balloon *Ornen*, ended in disaster. Nothing was heard of him until walrus-hunters found his remains in 1930. Andree's diary was well enough preserved for publication and his films could still be developed.

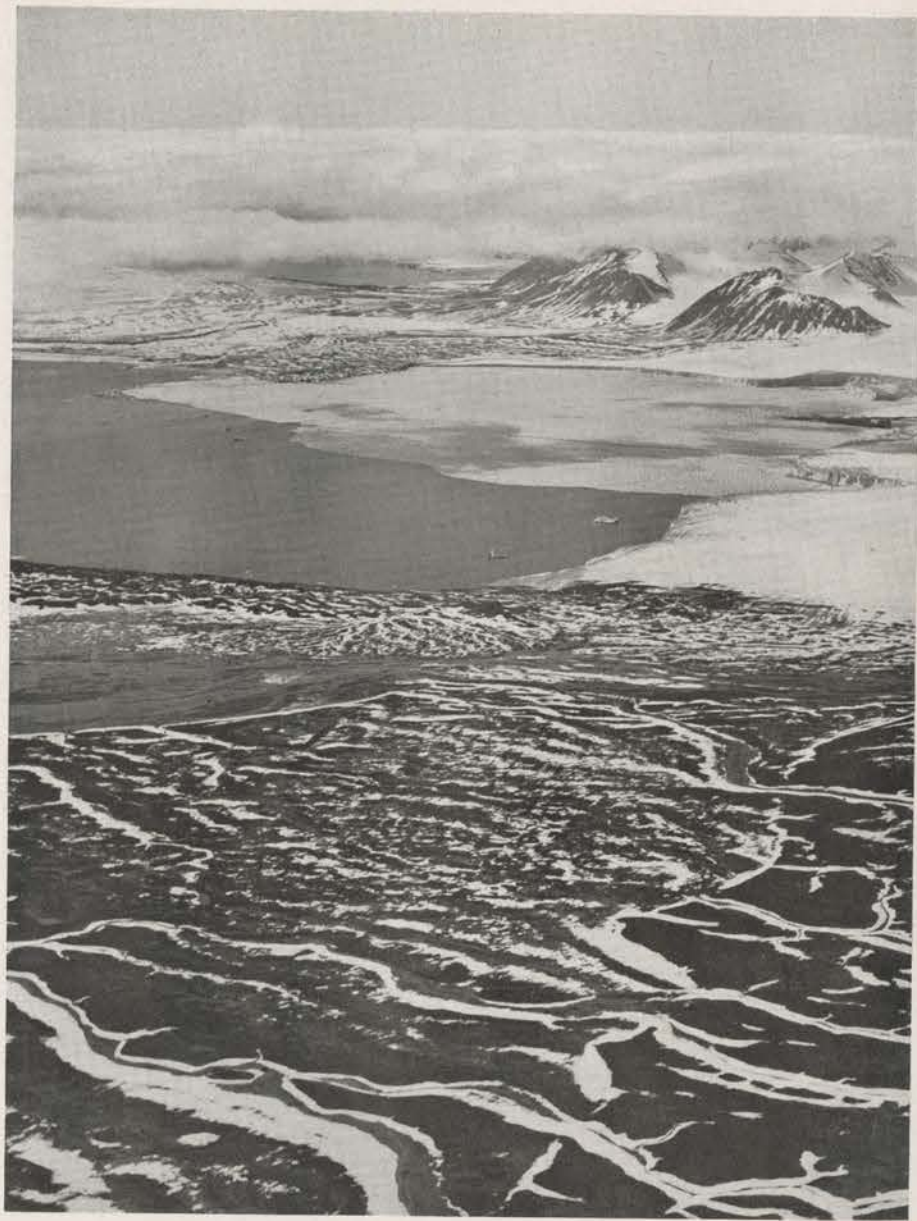
Amundsen attempted to fly over the North Pole with two aeroplanes in 1925, but he only reached the eighty-eighth degree of latitude. There one of his machines crashed. They succeeded after great difficulty in cutting a runway in the ice, and he returned safely home with all his companions. A year later he flew round the pole with Nobile in the airship *Norge*. In 1928 Nobile tried to reach the North Pole in his airship *Italia*, and nearly perished with the whole of his crew on the return journey.

Byrd was the first airman to succeed in flying over both poles, the North Pole in 1926 and the South Pole in 1929.



Vista of snowy peaks  
The Trollheim and Alkhorn ranges in the West of Spitzbergen from 4,000 feet.  
Foreground, snow-covered plateau; in the background, the sea  
Photo: Junkers





Glacier and frozen swamps  
The Bore glacier in Spitzbergen from 1,600 feet; frozen swamps in the foreground  
Photo: Junkers



Fjord in sunshine  
Ymer Bay, Spitzbergen; behind it, the Esmark glacier and Vermland hills.  
From 2,600 feet  
Photo: Junkers







wonders he beheld on these two flights in his books: *Skyward* and *Little America*. Here I will give only a short account of these two unique expeditions.

On the 9th May, 1926, he flew across the eternal ice of the Arctic Sea towards the North Pole. He looked down on the jagged ribs that jut up where the surface of the ice has been burst asunder. The fresh ice, where open waterways had frozen to, shone blue-green amidst the whiteness of the snow. At two minutes past nine, Greenwich mean time, his instruments told him that he was above the pole. The dream of his life was realized. But to be quite certain that he had really flown round the pole, he described a wide circle and thus in a few minutes circumnavigated the earth. "In doing that we lost a whole day in time and of course when we completed the circle we gained that day back again. Time and direction became topsy-turvy at the pole. When crossing it on the same straight line we were going north one instant and south the next! No matter how the wind strikes you at the North Pole it must be travelling north, and however you turn your head you must be looking south."

More exciting and adventurous was his flight to the South Pole. As he flew across the Ross Sea a fleet of icebergs moved towards him in battle formation. Then a chaotic landscape lay below him with frozen waterfalls and towering snowy cliffs, gashed with black pits and volcanic craters, whose mouths yawned up threateningly five thousand feet below. His way led on past mountains and glaciers.

Now he had two last high glaciers to cross before he reached the plateau of the pole. The heavy load of his machine imposed a great risk. There they lay in front of him—the Axel Heiberg Glacier and Liv's Glacier. Byrd hesitated. Which of these was he to cross? He knew the heights of the passes from the information given by Amundsen, measured the amount of petrol he had used and thus estimated his weight. From this he reckoned on his tables the greatest height to which the plane could climb.

He decided on Liv's Glacier. But what he could not reckon out beforehand was the formation of the pass. He did not know whether it was very narrow, whether there was room to turn in it, whether a cataract of air-currents poured through it. A strong down-draught would be enough to force down a machine laden, as his was, to the limits of its capacity.

Mist was rising from the black foothills of the Nansen group. Thin strips of cloud were streaming over the shoulder of the pass, perhaps bringing snow.

The last cans of petrol were opened and poured into the tank.

The broad line of Liv's Glacier swept towards them. The immense crevasses now resembled "the fluted surface of a washing-board". Through the highest gap an increasing down-current was pouring. The huge wings began to quiver and rock in the eddies of air. Violent gusts, rebounding from the steep cliffs of Mount Fisher, attacked the aeroplane. The air was so turbulent that he tried to find calmer weather further to the left. But he only exchanged the vortices of Mount Fisher for the down-draughts that swept over the crevassed ice-flanks of Mount Nansen. None the less, he had to pass between Mount Nansen and Mount Fisher if he was to climb high enough to get through at all.

The machine rose slowly and answered tardily to the rudder in the rarified air. Byrd and his crew watched anxiously as the machine rose and fell. They were not climbing high enough. One strong downward gust would be the end of them.

Byrd gave orders to open the main tank, and 2,500 litres of petrol were poured out upon the snow. Even this was not enough. A sack of provisions was thrown overboard and went rolling down the glacier. But the only answer was an increased downward current. The aeroplane staggered as though beneath a shower of blows. Byrd went further to the right in search of an up-draught. A second sack was thrown overboard. It burst on the glacier's flank. Two hundred and twenty-eight pounds of provisions, enough to keep four men alive for a month! But this sacrifice saved them.



The plane bored its way at eighty-six miles an hour through the notch of the pass. The cliffs of Mount Nansen dropped away beneath their wings to the left. In front of them lay the white uplands that led to the pole. Now they had to fly on for three hundred miles in a straight line and the pole was theirs.

A line of peaks arose on the eastern horizon; to the south-east glittering ice-caps and ridges in unbroken succession. Under the plane lay miles of smooth, soft snow broken by knolls and hollows. Byrd and his companions breakfasted on frozen bread and butter and drank coffee from a thermos flask. They thought of Scott and Shackleton who, starving and frozen, had crept like snails over the snowy expanse beneath.

Byrd flew round the pole. Then he turned and left that strange spot where there is only one direction—northward—where it is hard to tell the time, because the sun moves always at the same distance round the horizon.

#### LANDSCAPES AND CITIES

The airman subdues country after country and adds it to his conquests. But there are still many blank spaces on the airman's map of the world. There is still much for curious eyes to pry into from the cockpit of an aeroplane.

The airman's vision comprehends whole landscapes; his eye ranges over distances of many days' march, and thousands of separate photographs taken on the ground could not make up the picture that he sees. A relief map of the earth is stamped upon his mind and mountain ranges, forests, rivers and lakes lie side by side to be taken in at a glance.

And the scale of this map is not the reduced scale of the maps in our schools and museums, it is dictated only by the width of the horizon. Think how many such maps the airman studies in a single day at the present speed of aviation!

A whole continent is spread out before our eyes like a strip of film, as we follow Sir Alan Cobham through barely three

pages of his book, *Australia and Back*. He describes how he left the grasslands of the north, where vast herds of cattle were grazing, crossed great forests where whole towns were swallowed up—he saw nothing of Charleville till he found himself flying over it—to the vast farms of the south, which lie outspread in enormous patches as far as the coast. That gives an impression of a continent, which the thick, old-fashioned volumes of travel could never communicate.

But the airman and the traveller on the ground should never quarrel as to which has the finest view of the earth. Their perspectives are so different that one cannot compare them except in those borderline cases when the traveller looks down on the landscape from a great height or the airman looks across at distant places. Otherwise their impressions can never coincide. For their lines of vision dissect at right angles or something very near it. The traveller's view is built up physically in a horizontal plane, while the features of the same spot, seen by the airman, shrink and flatten out. He has difficulty in gauging the dimension of depth, until his eye grows accustomed enough to guess it automatically.

The airman has to renounce many of the delights of the traveller on the ground. The scents and sounds of the earth are not for him. He cannot see the thousand tiny beauties of a summer day, the open cups of the flowers, gleaming beetles and flaunting butterflies; he cannot hear the wind in the leaves or the twittering of birds.

But he is compensated by charms of a different sort. He delights in the ever changing patchwork of light and shadow on the earth's surface, the toylike aspect of everything beneath, the wonderful variety of patterns which roads, rivers, valleys, forests and hedgerows provide in unbroken succession. He takes pleasure in the rapidity with which these shapes are impressed upon him, the speed with which the world unrolls beneath his eyes.

At harvest time especially a motley picture is presented to the airman. Then Old Mother Earth puts on her bright

500 Luis Dante A.  
C-44

CMA FLIGHT 901  
POORER DEC 19/64  
RAMON ESPINOZA

FROM LAX TO MEXICO

CMA  
CREW

Flight 910-B-5-1-65  
MEXICO-LOS ANGELES  
STW: PNA MARIO NGJIA  
MAREO J. ESPINOZA  
Cap. E. R. CORONA  
F.O. A. FRANCO  
P.H. POSADAS

Capt. G. Settler  
1st of L. AMAROS  
2nd of M. FARIAS  
STW: ARABELLA PAMPIN  
STW: M. Soledad Figueroa

CMA Flight 901  
Los Angeles-MEXICO  
Dec 20/64



patch-work cloak. Every field has a different pattern: plain, stippled or speckled, according as the grain is still standing, or has been mown, or is stacked in sheaves. The plough draws strange figures across the fields, and often a solid, unploughed patch is left like a kernel in the centre.

How charming a village looks in the expanse of surrounding country. You cannot help falling in love with it; it looks so childish, while you feel such a giant! Sometimes the meadows round the village are dotted with white—the washing has been hung out to dry.

Felled trees, stripped of their bark, show up conspicuously in the forests. Sometimes a sand quarry lies among the undergrowth like a patch of sick and mangy earth.

Everything down there is so quiet, so tranquil, so motionless, that one feels the whole earth must have gone to sleep.

Only the play of sunshine on rivers, lakes and ponds brings a glitter of life into the landscape. Over every patch of water there is a drizzle of dancing, silvery sparks. It looks as though the water had caught fire for a moment and was on the point of going out again. Even when the mirror of a lake is dimmed by cloud-shadows, a matt shimmer still flits across its leaden grey. The sun sets all the little ponds gleaming one after the other like the winking of a lighthouse. Streams shine thin as knife-blades. The sunlight darts like quicksilver through the channels of irrigated fields.

How rich and various are the colours of the earth! There is always a faint breath of mist above the ground, and this is tinged with every known colour; it blends their liquid hues together, giving them delicacy and mystery. The range of one's vision produces a blending of colours such as is rarely seen in such rich variety upon the ground. I have often wondered why painters do not more often use the aeroplane and paint their pictures with an airman's eyes.

The camera has conquered a new world of moving pictures from the skies and an untouched sphere of novel, pictorial effects awaits the next generation of painters. Airscapes will provide

Cap V John Cranston UAL 2/13/65

a new variety of painting, and perspectives will be achieved in wash and oil such as the artists of Japan have dreamed of and tried by other means to set on their canvasses.

How marvellous is the variety of tones in the brown of the bare earth! Hardly two fields have the same tint of green. The hues of brown and green seem to be incalculable. A sinuous brook breaks black through a patch of deep green moss. The woods are greenish-black. Villages strew their reds, greys and whites across the landscape. A cottage stands pale pink, like icing-sugar, in the green of the meadows. Lakes are gold-brown in forest dells, light-blue in the meadows and glass-green among the hills.

The loveliest play of colour I ever saw was on arriving over Venice. Suddenly the sea shimmered a silken-grey between white clouds. Then the clouds were behind us and the sea was blue, flecked with four, five, six rows of white combers. It lay there a shining band of emerald around the coast. The whole country seemed to be under flood: a maze of lakes, rivers, ponds, canals, varying in colour from palest blue to deepest mauve according to the depth of the water. Between them fields and mud-banks, green, yellow, brown and grey. And beyond, the iridescent water of the lagoons. In the midst of all this the island city of Venice, and smaller islands, all set in shining emerald green. Here and there red, brown and yellow sails, and—a thin black line among the colours—the long railway embankment connecting the islands with the mainland. I never knew Venice until I had seen it from above.

The following description by Sir Alan Cobham of a flight near the Persian Gulf expresses his delight in the manifold beauty of colour: "There are mountains and hills of varying hues, such as a sugar-loaf formation, towering up several hundred feet, of a brilliant turquoise blue; then, close by, a similar mass of perfect jade green; and in the background a mountain of indigo blue beside a range of bright yellow hills, while in the foreground rise mounds of bright red rock. In between these amazing masses of colour are streaks of silver formed by the

Sp R. L. Rawns JAL.

over the Trinity Affo 27 July 31/1001

1st Lt. G. M. A. UAL 1-13-65  
1st Lt. G. M. A. UAL 1-13-65  
3rd Lt. G. M. A. UAL 1-13-65



FLIGHT 612 SEPT 22 1950  
 CAPT. Guy E. Cain  
 1ST OFF. Duane Ferguson  
 2ND OFF. George & Rutchell  
 STAFF. Sam Peterson  
 STAFF. Jo Anne Stevens

SEATTLE PORTLAND TO DENVER  
 You have a most valuable book here.  
 It was quite a shock to find out it  
 has been mine these since we went  
 flew together - time really does fly. Let's  
 hope I can make many more trips in  
 your book as they years go by. Guy.

150

# THE FACE OF THE EARTH

silver sand of ancient dried up river-beds. Away to the south in a deep blue sea we saw the island of Hormez."

No region of the world is so monotonous and forlorn as the Mongolian steppes, which extend to the horizon in endless undulations. The forests degenerate at their edges into scrubby bush, but soon even this comes to an end. The rivers Borsa and Onon run shallow and dry up. And yet the airman above this wilderness sees marvellous gradations of colour. "Greenish-yellow changes by a series of the most delicate pastel tones into a rich orange relieved by blue shadows and transmuted on the far line of the horizon into the dull lilac of mountains. It is like a beautiful silken carpet, whose colours bloom to a strange life of their own in the warm light."

It would require many volumes of an air Baedeker to describe the earth as the airman sees it. The pictures which illustrate this book must speak for themselves. I shall confine myself to those landscapes whose conquest we owe specifically to the airman, landscapes which have never been seen before or which are so remote from the centres of civilization that few people have ever reached them even by aeroplane.

The illimitable wastes of Siberia awoke to life for the passengers who crossed them in the *Graf Zeppelin*: miles and miles of swamp, then primal forests rising from the boggy earth; a few simple clay huts in utter solitude, a scrap of field, unkempt cattle and a few peasants in white blouses. "Over the bare, barren hills and valleys of this chaotic land hangs the majesty of infinite silence. The place is so forlorn that one shudders . . ." Thus wrote one of the passengers, describing this part of the first flight round the world.

No human eye had ever looked down upon "the green hell" when Francesco de Pinedo flew across it. He followed the innumerable windings of the Rio Guapore in Paraguay. The skeletons of monstrous dead trees, black and leafless, rose out of the deep green of the forests that stretched below him for miles, impenetrable and uniform. He reckoned the depth of the forest by the height of single trees standing on distant



Sandy desert  
 English soldiers encamped in the desert near the Suez Canal. The white dots are tents; to the right, barracks.  
 The fine sand retains every impression  
 Photo: Bayerisches Kriegsmuseum





Dying oasis  
African desert from 3,250 feet. The dark spots are the palm-trees of an oasis which has  
been smothered by sand  
Photo: Walter Mittelholzer



Salt desert  
The Persian salt desert, South of Isfahan, from 6,500 feet  
Photo: Ad Astra Aero



May 22, 1950 *In Flight*  
ON THE MAINLINER  
Flight 281- Seattle to Vancouver  
Captain - Walt Fuller  
Co-Pilot - H. E. "Pop" Pappan  
Stewardess - Jo Anne Stevens



1



2

1. Limestone peaks  
on the road from Latrun to Jerusalem  
2. Edge of the desert

Trees planted to hold back the sand. Note the road and dried-up river-bed

Photo: Bayerisches Kriegesarchiv

river-banks, and estimated it at one hundred and sixty feet. Above him was a dark sheet of cloud; below him, the gloomy forests, and so he flew on, utterly alone, for hour after hour.

Airmen have discovered native settlements in the primitive forests of Brazil, where human habitations were not even suspected.

The machines of the German Luft-Hansa crossed another inaccessible and remote country, when they flew over Northern Mongolia. The whole country is covered by broad-backed mountain-ranges. They have no indented ridges like our Alps. Trees and matted undergrowths cover the sides of the gorges. The weathered heights are sparsely dotted with firs and pines, and the storms sweep furiously across them so that wide areas have been shaved clean by the wind. The bleached trunks lie there uprooted; the timber rots; there is no road or settlement for miles around.

From Port Arthur the fleet of aeroplanes passed southward along the Pacific coast. Bare, riven hills are gold brown in the warm light and rise in the distance to jagged peaks. The cliffs fall sheer into the sea. Mountain torrents pour down through deep narrow gorges. Here are the hiding-places of Chinese pirates. Near Shanhaikuan, the Great Wall of China rises out of the sea, climbs boldly over the ridges and slopes of the coastal ranges for about eighteen hundred miles till it comes to an end in the sands of the Mongolian Desert. For centuries this titanic work of human hands protected the civilization of China from the inroads of the nomadic tribes of Northern Asia.

Once an impassable barrier, to-day a thin, fantastic streak across the world of the airman!

Airmen have discovered a similar wall of unknown extent in the mountains of Peru. It appears to date from the Inca period, and climbs in a straight, relentless line across the mountains. It is scarcely credible that men could have built it with the tools available at that time.









Coastal fort  
Spanish fort with hangar, Rio de Oro, West Africa  
Photo: Walter Mittelholzer



Native village  
in Nigeria, West Africa  
Photo: Walter Mittelholzer





City on the edge of the desert  
Cairo, Egypt. Citadel and Mosque of El Tulum  
Photo: Aircraft Operating Co. Ltd.

tents of the Bedouins and Arabs, who, with gazelles and jackals, are the only inhabitants of the desert."

Saline rocks, eroded by the rains, rise up sharply from the salt desert. Deep furrows and channels run for miles, and between them the caravan tracks, trodden out for centuries by the feet of men and animals, lead straight on across the desert.

The expanse of sand, seen from greater heights, has a pattern very similar to that of the sea: wave on wave is finely graven across it. A few darker spots on the infinite brightness show the sites of oases, which the sand has choked and partially buried. Only the dessicated tops of the palms break through the sandy surface.

But it is not only the broad stretches of country that appeal to the airman; he sees also the towns and villages with their peculiarities of architecture and situation. And again there is a special charm in the combination of the parts of a complex scene, which becomes a single impression to the eye.

Air-pictures, taken from a sufficient height, can show a whole city in the midst of its natural surroundings. Then it looks like the impression of a vast signet upon the earth. The airman remembers the outlines of many towns, and recognizes them at a distance by the characteristic points and lines which form, as it were, their signature.

### (PILGRIM FLIGHT)

Coming from the south-east, the airman finds himself approaching the sacred town of Bethlehem. Hills lie before it, terraced, with bare sandstone caps of the sort that covers the whole land round about Jerusalem.

Vines and olive-trees grow on their slopes and in the valleys. And one sees, wherever a drop of water wells from the ground, meadows and strips of cultivated land and plantations of fig-trees.

There is Bethsahur, a little village on the edge of the hills,



and behind it, bedded in the uplands of Judaea, a wide fruitful field—the Field of the Shepherds.

Here it was that the shepherds abiding in the fields were keeping watch over their flocks by night, and lo, the angel of the Lord came upon them and the glory of the Lord shone round about them and they were sore afraid. Descending towards this field—over which the airman is now flying—the heavenly hosts filled the air that bears up his machine: "On earth peace; good will towards men!"

Bethlehem lies on its twin hills in the noontide brilliance of the sun. The ledges of the thousand little rock terraces are green with olive-trees.

On one of these fields round Bethlehem Ruth gleaned behind the harvesters. The words of wise men and poets have been forgotten, but the words of Ruth have not been forgotten, lovely words of humble loyalty that survive the passage of the centuries: "Whither thou goest I will go, and where thou lodgest I will lodge: thy people shall be my people, and thy God my God."

On one of these fields David fed his father's sheep, when Samuel sent for him. And he was ruddy, and withal of a beautiful countenance and goodly to look at. Samuel took the horn of oil and anointed him in the midst of his brothers, of whom none was chosen. "For man looketh on the outward appearance, but the Lord looketh on the heart."

Here arose the cries and lamentations of the mothers of Bethlehem, when the soldiery of Herod passed through the streets slaying the little ones. The airman is circling round the Church of the Nativity, which stands on the eastern hill above the Valley of Locusts.

According to Christian legends the Saviour was born in the crypt beneath the church. It was here that the three kings from the east came to adore the Child.

Above the spot—the airman looks up instinctively into the mild blue, where a pale white moon is now hanging—the star stood still in the heavens, the Star of Bethlehem.

Best regards  
Sally  
V.A.A. Steward  
23-11-60

SALWA. GHALI

Happy Landings  
Galvin Steward  
V.A.A. STEWARD  
23-11-60



Pyramid  
near Ghizeh, Egypt  
Photo: Aircraft Operating Co. Ltd.





Waterfall  
Victoria Falls, Northern Rhodesia. Foreground, the narrow gorge of the Zambezi  
Photo: Aircraft Operating Co. Ltd.



River  
The Ebro, near Osera, Spain, from 8,000 feet  
Photo: Ad Astra Aero





Winding river

The sinuous course of the Jordan, Palestine, between leafy woods, hemmed in by rocky desert

Photo: Bayerisches Kriegsarchiv



Delta

A river-delta in the salt-marshes of Persia, from 1,000 feet

Photo: Junkers





Silted river-bed  
The Piave near De Taveri, Italy, from 3,250 feet



Floods  
in the Amper Valley, near Lake Ammer, Upper Bavaria  
Photo: Photogrammetric





In the wake of the storm  
Uprooted trees in the Bavarian Forest  
Photo: Photogrammetrie

In the northern and western parts of the town he sees the shining lines of extensive buildings with solid boundary walls—churches, monasteries, orphanages.

He can make out among the maze of winding alleys a street that runs out at a sharp angle on to the high road from Jerusalem to Hebron. Somewhere in one of the gardens at the beginning of that street is the well of David.

The Philistines forced their way into the land. But David hid himself in a safe place, in the cave of Adullam. And David longed and said: Oh that one would give me to drink of the water of the well of Bethlehem, that is at the Gate. Then the heroes Jazobeam, Eleazar and Samma broke into the camp of the Philistines and drew water from the well of Bethlehem that was by the gate, and brought it to David. And David would not drink it, but poured it out to the Lord and said, "My God forbid it me that I should do this thing. Shall I drink the blood of these men? For with the jeopardy of their lives they brought it."

(Earth and sky are full of legends).

The pilot circles round at a lower height. There, on the left hand side of the road, visible as a bare group of rocks, is the grave of Mother Rachel.

(He follows the road to Jerusalem, approaching it from the south, but in obedience to some secret impulse he turns to the east and comes upon the city from this quarter.

He recognizes the broad hill down below him, breaking the line of the terraces, as the Mount of Olives.) In the valley between the city and the Mount of Olives is the Garden of Gethsemane.

Here, on the night before His crucifixion, Jesus attained through agony His deepest and ultimate conviction, the conviction that the body is nought and the spirit everything, that whoever serves the spirit must ignore the world and the flesh. "If Thou be willing remove this cup from Me: nevertheless not My will, but Thine, be done."

Franciscan monks tend the ancient olive-trees in this garden



and sell to pilgrims the oil they press from the fruits and the stones they carve into rosaries. On the south-west slope of the Mount of Olives, at the edge of the Garden of Gethsemane, the little domed towers of the Russian church gleam in the sunrays.

Across the valley, the walls of the Temple Square shine broad and solid. From its centre gleams the bright faience cupola of the Mosque of Omar. It stands in the broad, empty court of the Temple on a raised square of stone, and many steps lead up to it. Clearly visible in the middle of the foremost wall is the Golden Gate, walled up for all time by the Caliph Omar.

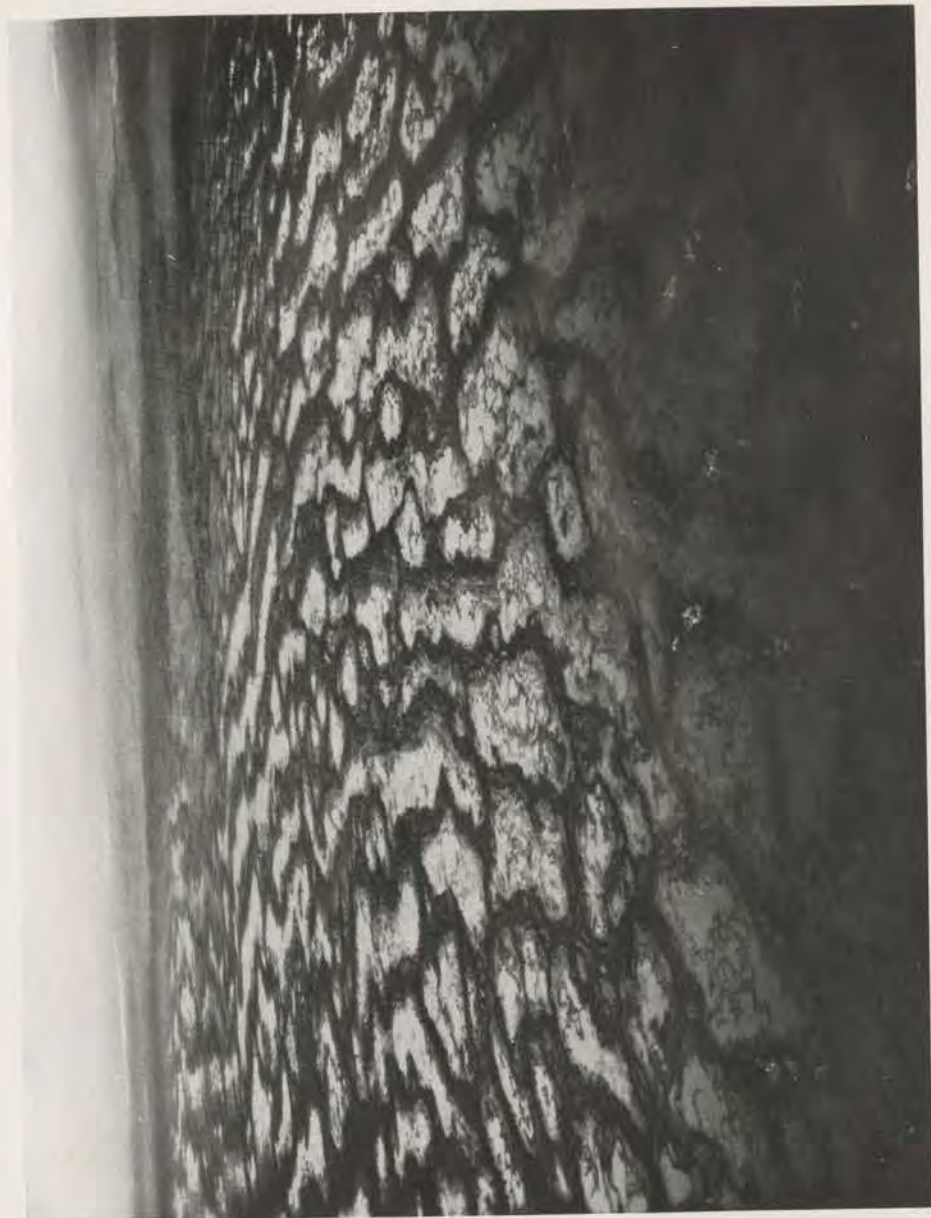
There, where the gleaming wall of the Temple Square joins the darker city-wall, which encircles Jerusalem with its towers and gates, the Lion's Gate stands open, leading out to the *via dolorosa*, where Christ carried His cross to the Hill of Calvary. The airman crosses this road and flies toward the centre of the city.

Now he looks straight down on the Temple Square, and sees on its southern side the long line of the Aksa Mosque. In the broad court are dark scattered cypresses and tiny human figures.

There under the round dome lies the most legendary spot on earth, the Holy Rock.

He flies over the cliff. For the orthodox Jew this is the centre of the world. On Judgment Day the angel Azraphel will appear upon it and sound his trumpet. After the flood, the ark of Noah rested there, and the dove brought Noah an olive-leaf from the mount near by. This is where Abraham was about to sacrifice his son, Isaac. According to the Moslem legend, it was from this spot that Mohammed rose up to heaven, riding on his horse Burak. Then the rock tore itself away from the earth and endeavoured to follow him, but the angel Gabriel held it fast. Since then it has hung over the cliff, waiting for the return of the prophet. We assume that it was once the altar of burnt offering in Solomon's temple, and before that perhaps an ancient stone of heathen sacrifice.

The Christian quarter stands out from the maze of alleys and houses by its massive buildings and the slim angular tower



Siberian swamps  
Photo: "Luftschiffbau Zeppelin"





ALITALIA  
LINEE AEREE ITALIANE



Il Comandante GENSINI

comunica ai Sigg. passeggeri le seguenti

## NOTIZIE SUL VOLO

Flight information from Captain  
Informations sur le vol

AEREO I. DIMB DATA 11-XI-1960 ORA 10.10 LOCALE  
Aircraft Time 09.10 GREENWICH  
Avion Heure

POSIZIONE LUXEMBOURG  
Position

QUOTA S. L. M. 17000 feet 5100 m  
Height  
Altitude

Altitude  
QUOTA DELLA CABINA 3500 feet 1050m  
Cabin altitude

VELOCITÀ EFF. Km/h 450  
Ground speed  
Vitesse eff.

FRA 20 MINUTI SI VEDRÀ A  
In about minutes we shall see on our  
Dans minutes nous verrons à

**SINISTRA**  
*left-gauche*

**DESTRA**  
*right-droite*

STRASBOURG

SI PREVEDE L'ARRIVO A MILANO Linate ALLE ORE 11.45 LOCALI  
 Estimated time of arrival at at 10.45 GREENWICH  
 On prévoit l'arrivée à à heures

NOTE: BUON VIAGGIO - HAVE A NICE TRIP

BON VOYAGE



Thais.



3 DROGELS.



Flight 634 - 10-11-1960.

~~1/1/11~~

~~Y. H. H. H.~~  
Y. H. H. H.

2. Date

1<sup>st</sup> OFFICER.

Flight Engineer

A. n. Hostess.

Steel

Stew

Best wishes from  
your crew.





Ships in harbour  
The Maas harbour, Rotterdam  
Photo: K. L. M.

of the German evangelical church. Many monasteries surround it. To the north, embedded in a confusing mass of churches and chapels, lie the Holy Sepulchre and Golgotha. Behind the Christian quarter a black rectangle of houses is mirrored in a Roman bath.

There are many other spots the airman could identify, but he is tempted to rise higher and circle once more round the city.

For this higher view is his alone: the whole of Jerusalem set in its natural surroundings.

(No pilgrim has ever seen the Holy City from this viewpoint. He sweeps higher and higher.

Jerusalem drops below him, dwindles and contracts, till at last it is no more than a single group of buildings on the top of a hill. And all round are thousands of other hills in a wild, riven lunar landscape.

The airman flies eastward over a wilderness that has not its like in the world. One after the other, naked marlstone hills come into sight, like a huge herd of elephants with broad, grey backs. Here and there a steeper, craggier height rises menacingly above the rest. One of these is the rocky Az'azel, from which the scape-goat was thrown. Looking down at this terribly desolate country, the pilot understands why Jewish legend chose this site for the story. To the south-east shines the still, blue surface of the Dead Sea, its shores glistening with salt crystals, and beyond it the Mountains of Moab are wrapped in bluish mist.

Now he has reached Jericho.

There is still a green oasis on its site, a faint reflection of its great and renowned fertility in biblical times. It was here in the spicy gardens of Solomon that Herodias held court during the winter. The shady gardens and fields are a pleasant relief to the eye after the rocky desert the airman has just passed over.

And now a new place of pilgrimage lies beneath him. He crosses the Jordan at the spot where, according to Christian



traditions, Jesus was baptized by John. On yonder shining hill the people gathered and listened, as the preacher of the wilderness summoned them to repent. For the axe is laid at the root of the tree; soon one shall come with a flail in his hand, and he shall cleanse the threshing-floor and gather the wheat into his barn; but the chaff he shall burn with unquenchable fire. And many were afraid and followed John to the bank of the river and were baptized.

How vivid this incident becomes as you look down from above at this extraordinary scene! Here Nature has erected a stage; its background is the low ridges of the hills, and it is hemmed in by the trees and brushwood of the Jordan banks. There is only one path down to the water, and at its foot is the pool of baptism. Every spring thousands of Christian pilgrims in white robes are said to bathe here in the sacred water.

The airman follows the course of the Jordan to Lake Gennesaret. The innumerable windings of the river are framed in woods and thickets. Flying lower he can make out willows and poplars. The Jordan gushes along in a series of extraordinary loops and curves, frequently broken by rapids. As the crow flies the distance from the lake to the sea is one-third of the river's actual course.

The still dark waters of Lake Gennesaret gleam before the pilot's eyes, but he turns off in a south-easterly direction and is soon flying over Nazareth, the final goal of his pilgrimage. Here it was that Jesus spoke to His fellow townsmen. But they were angry with Him and asked whence He had such wisdom. So He left them. "A prophet is not without honour save in his own country and among his own kinsmen."

#### (A FLIGHT INTO THE PAST)

The pilot is flying across the Plain of Jezreel. He started from the port of Haifa at an early hour in the morning. He has flown along beside the mountains of Carmel, with their rich



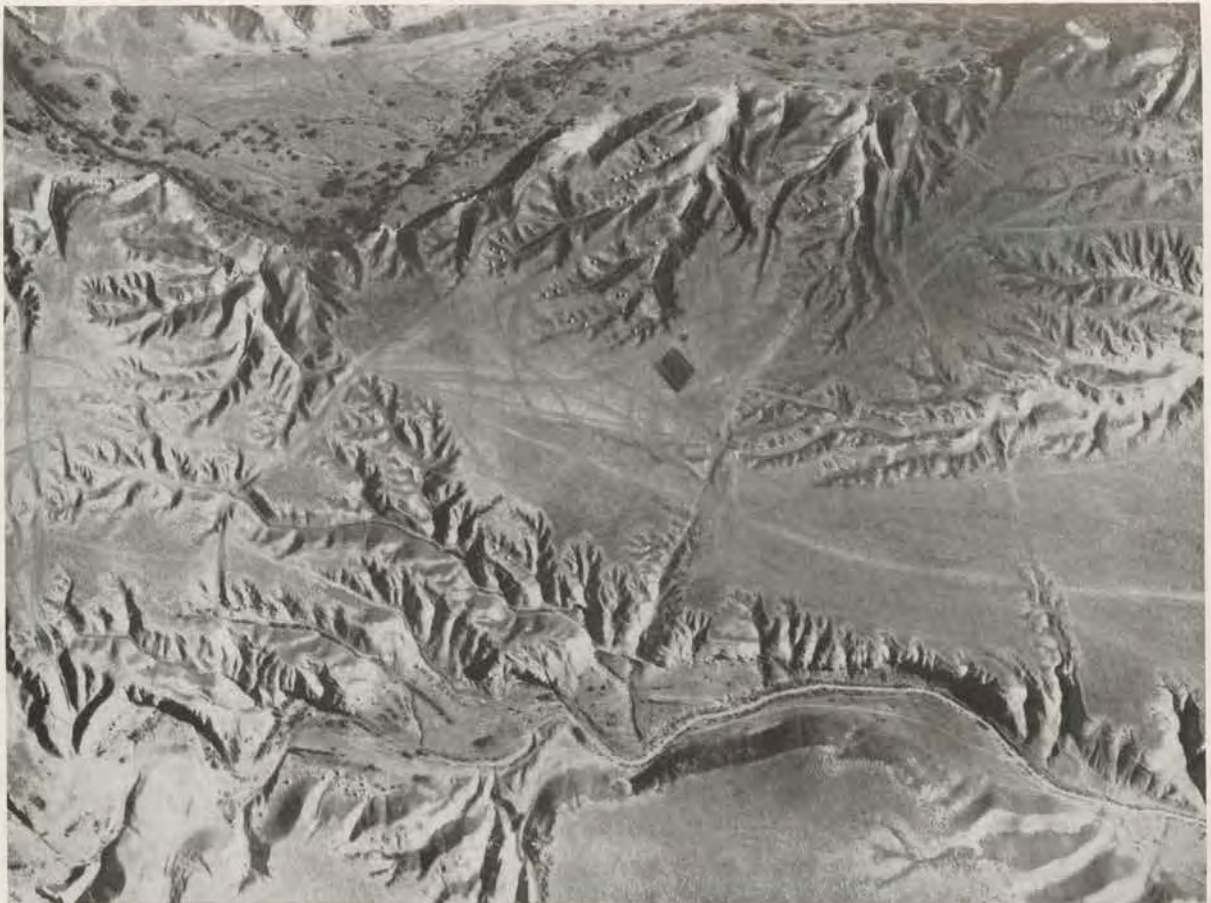
Jerusalem  
In the foreground, the Temple and the cupola of the Mosque of Omar. The Christian quarter is clearly visible in the background

Photo: Bayerisches Kriegsarchiv





Baptismal pool in the Jordan  
Photo: Bayerisches Kriegsarchiv



Rocky desert  
Strange, plant-like formations in the hill-country West of the Jordan  
Photo: Bayerisches Kriegsarchiv





Hills of Judaea  
The rocky desert East of Jerusalem  
Photo: Bayerisches Kriegsmuseum

I hope I'll get the pleasure to see you again sometimes - and your book which tells about what an interesting life you must have led - Best wishes - Love Biggerson (Stenwood)

# A FLIGHT INTO THE PAST

183

springs and oak forests. Monks on the crumbling walls of their monasteries, hermits at the mouths of their caves, have stared up at him distraught and shaken their heads. Now he is above the great plain that separates Samaria from Galilee.

Northward, beyond the rectangle of the Nebi Dahi, Nazareth swims into sight. Soon afterwards, in the same quarter, the rounded, thickly-wooded Mount Tabor rises into the pale-blue sky. Below, among glittering waterways, the airman sees Besan, a ruined town of the Roman period, recently rebuilt. The streams flow through a cultivated plain that stretches far to the south and so they reach the Jordan.

Now he could easily follow the river's sinuous course, as he has often done before, flying southward to the Dead Sea or northward to Lake Gennesaret. The hills east and west of the Jordan drop down in steep gorges to the river's banks. Here the yellow waters of the Esh-Sheria, as the Arabs call it, flow through woods and thickets alive with birds and wild pigs.

But to-day the pilot has another goal in view.

He crosses the river and flies south-east towards the rocky desert that gleams brightly in the distance. A plateau of light-grey limestone, gashed by many valleys, lies below him, and as he flies southward the plateau rises in terraces till it soars sheer upward to the peaks of the Adshlun mountains.

The verdure of the oak-forests is of a richness rare in Palestine. This is the Land of Gilead.

In the Song of Songs, King Solomon likened the hair of his beloved to the silken hair of the goats of Mount Gilead; the goats still graze on the lush pasturage of these hills. The land is broken by the gorge of the Jabbok, which is over three thousand feet deep. In spring the walls of this chasm are covered with luxuriant greenery, and the blossoms of the oleanders, bright-red and white, can be seen far away.

At the foot of the El Melad, by the little river Wadi Jerash with its blooming oleanders, lies a little village surrounded by rubble and coarse grass, and near by the ruins of an ancient city. Yes, here at the edge of the desert was a mighty city.

Dear Madame,  
I wish you many happy and interesting trips in the future. - When there is no more space in this book, you'll have to find another one. - Best wishes Borghild Holmsen

ON BOARD SAS' CARAVELLE TO MÜNCHEN, MAY WE WISH YOU A PLEASANT TRIP. 23/9/60 N. Mella. Heaven is well known -

Stefan Houtz - up from back (Dresden)

SAS - AIR HOSTESS



It was called Gerasa. It was built by the Greeks and Romans, but no one knows when. The period of its greatest prosperity is said to have been two hundred years after the fall of the Jews. A Roman military road led past it from Damascus into Arabia, and was afterwards used by the Arabs as a caravan-track.

Looking down at the pillars and ruined walls, the airman is reminded of a passage in Maria Rainer Rilke's *Stundenbuch*, in which the poet speaks of great cities :

*For the great cities, Lord,  
Are lost, melted away,*

*Their little hour soon gone.*

All that remains is to be seen on the two photographs which the pilot brought home from his flight. But that little reveals so much.

The first picture shows the southern part of the town. The wide sweep of ruined wall, which touches the left-hand edge of the picture and forms a great rectangle, indicates the area of the city. Not far from the relics of the southern gate, are the ruins of a temple. There were eleven pillars on the north side and eight on the east and west. Some are still crowned by Corinthian capitals, which the pilot can see with his naked eye, so wonderfully clear is the air. The south wall of the temple, before which stood the figure of the god, is still standing.

Near by, close to the city-wall, is the southern theatre. The pilot can count more than thirty well-preserved rows of seats, which are divided half way up by a broad gangway into the upper and lower parts of the auditorium. Shadowy archways mark the ends of the gangway, through which the audience left the theatre. There must have been seats here for thousands of spectators, and as they looked across the open stage their eyes fell on the palaces and gardens of the city.

North-east of the theatre and the temple is a semi-circle of pillars, fifty-six in number, standing round a paved space. This was the forum. From the forum a magnificent colonnade, bordered by the palaces of wealthy citizens, ran through the whole town. The irregular, walled square, with the level, dark-coloured floor, behind the three groups of connected pillars, was probably the market-place.

The same square can be seen near the left-hand side of the second picture, which shows the northern part of the town. The continuation of the colonnade can be clearly traced as far as the baths, which were supplied with water from a spring on the further side of the stream to the north-east. The areas with the honeycomb appearance left and right of the road show that thousands of people could bathe here at the same time.

The Temple of the Sun with its lofty pillars rises solitary above the ruins of the city. Its capitals are richly ornamented with garlands carved in stone. Parts of the temple-walls are still standing.

A second colonnade runs straight across the whole picture.

To the north of the town, at the right-hand bottom corner of the illustration, near the baths, is another theatre. This was used presumably for gladiatorial combats and fights between wild beasts. It has seventeen rows of well-preserved seats.

The white house that stands out so clear and bright at the northern end of the great colonnade was inhabited by the party that carried out the excavations. Before and even during the war, German archaeologists were resident there. It is similar to the houses in the village, which can be seen on the near side of the trees in the left-hand corner of the first photograph.

This village is inhabited by Arabs and, strange as it may sound, Circassians. In 1787 the Sultan Abdul Hamid transferred them from the Caucasus and the Dobrudsha to this spot east of the Jordan. They were put there to defend the country against the inroads of desert tribes. To-day they till the land, breed cattle and burn charcoal.



Dsharash, which is the modern name of Gerasa, has about fifteen hundred inhabitants. They have built their houses with stones taken from the ruins, and in this way the destruction of the ancient city goes on apace.

As the pilot circles over these magnificent ruins, he reflects on the insignificant and penurious lives of the people who live at their edge.

Some day the steel girders of modern towns will rise into the sky, ruined and deserted like these pillars, and beneath them our children's children will pass their dull lives in straw-roofed huts, ignorant of the triumphs, the struggles and the sufferings of our over-conscious age.

Capt. Edwin R. Jones Flight 551  
9/9/46

C.O. Pilot Neil H. Johnson 9/9/46

1st Stewardess Virginia Mae  
2nd Stewardess Wade Stern

Glad to have you with us for  
your first DC-4 trip.

Capt. W.C. Reynolds Trip 528 3-1-47

1st off. J. F. Casdell

Studs. Ginny Krueger

Capt. W.S. Hughes Trip 581, March 3, 1947

1st off. J.H. Crooks

Studs. Martha Kruschuk



Southern part of Gerasa  
Ruins of the ancient city of Gerasa on the edge of the Syrian desert  
Photo: Bayerisches Kriegesarchiv





Northern part of Gerasa  
Photo: Bayerisches Kriegearchiv



To  
Mrs. Ethel Young  
Hale.

CAPT. GEO.  
HENDERSON  
U.A.L.  
-AB



Many a time have I longed to fly over the Egyptian  
camels & nomads in support of Montgomery  
Pilot Basham



Grazing camels  
in the Egyptian desert. In the foreground, two Arabs with their tent  
Photo: Velhagen & Klasing

Ernest Wynn Ed. 7/13 Sept. 4  
YOU HAVE A MOST VALUABLE BOOK HERE, BELIEVE ME!  
I GOT A HUGE WFT GOING OVER THE NAMES OF FELLOWS,  
NOW DEPARTED, AND THOSE INTREPID AIRMEN STILL  
PUSHING THEIR FLYING MACHINES AROUND. I'D LIKE TO SEE  
MY NAME WRITTEN HERE FIFTEEN YEARS FROM NOW.  
THE AIRMAN AND ANIMALS CAPT. GEO. W. HENDERSON

BUT the world of the airman is not composed entirely of great  
distances, of rapidly changing landscapes and aircapes. It  
contains not only the vast, tranquil outlines of the earth and  
the signs of human labour and constructive effort. No, it  
reveals significant detail: it is inhabited.

One might expect that the extreme speed of an aeroplane  
would make it impossible for the airman to notice details, or at  
least to take note of the creatures that live on the earth and in  
the air.

I have often been asked questions of this sort: Does the  
pilot see birds flying in the sky? On a long-distance flight,  
does he notice the animals? How do animals react to the  
presence of an aeroplane?

Yes, the airman sees the birds that fly past him or follow  
his course below or above. They may even become dangerous  
if they fly too close to the propeller. For when it is turning at  
the high speed of fourteen hundred revolutions per minute, a  
propeller would be splintered by collision with a bird, and the  
machine would have to make a forced landing.

Therefore the wise pilot avoids our feathered friends.  
Antonie Strassmann, who took part in the Do X expedition as  
an auxiliary pilot, tells of a gull that collided with the huge  
propeller of the flying-boat. Nothing more was ever seen of it.  
But a piece of wood was torn out of the edge of the propeller,  
very small, but large enough to make the cautious Captain  
Christiansen compensate for the loss of weight.

The Italian pilot Francesco de Pinedo met such swarms  
of condors above the forests of Paraguay that he was compelled  
to keep his eyes fixed on the nose of his plane in order to steer  
his way between these powerful birds.

Best wishes and many happy flights -  
Betty Lane  
Stewardess  
I have enjoyed having you on board me. Hope -  
with best wishes  
from Ed  
Stewardess







Mittelholzer saw seals sunning themselves lazily on the Arctic ice as he flew over the drift-ice of Broad Bay. As his aeroplane passed over the steep crags on the west coast of Spitzbergen, the noise of his engine alarmed thousands of nesting gulls. Byrd, Amundsen and Wilkins tell of the hundreds of seals they saw basking in the sun, their forms black against the dazzling white of the ice-floes. As the plane came nearer, the animals floundered hastily away to flop into the nearest open water. They tell also of the black and white penguins that doze motionless on the ice or strut across it with patriarchal dignity.

Wolfgang von Gronau, on his flight from Iceland to Greenland, saw the silvery tracks of diving whales amidst drifting icebergs. Plüschow saw thousands of sea-lions rolling and grunting on the rocky coasts of the Patagonian islands. "They evidently felt much at ease in the dim light, for the sun was shining through mysterious veils of mist. Suddenly they reared in alarm and looked up at the new age that had just passed noisily above their maned heads."

Dr Knauss discovered seals in a part of the world where one would scarcely expect to find them. Where the Selenga sweeps down masses of silt from the mountains of Mongolia into the broad, marshy delta of Lake Baikal, the flat sand-banks suddenly came to life. The hum of the engines had frightened schools of seals that were lazily sunning themselves on the sand. They moved off with amusing haste and dived splashing into the water. "Probably they had reached Lake Baikal from the Arctic Ocean, by way of the rivers Yenissei and Angara."

In the same way Mittelholzer came on dozens of hippopotami as he was flying over the shores of Victoria Nyanza. They were waddling peacefully across the grass to the yellow sandy shore, and as the plane approached they threw their clumsy bodies with the utmost haste into the water.

Flying over the Nile, which forms a maze of bends, backwaters and floating islands, he watched the crocodiles drop into the water from the thickets of reeds, and the black clumsy



Thousands of wildebeest in flight from Mittelholzer's aeroplane near Serenje, Northern Rhodesia  
Photo: Walter Mittelholzer

Wildebeest in flight

Sturges  
Lewine  
J. S. S. S.

It's a pleasure to have you on board, and  
hope to have you on again. WAL FLT #731, 12-21-58  
Capt. Joe Sedley  
1st Officer Ralph Baxter  
SEA TO LAX  
Ft Eng. Chuck Martin

R.H. Kohler  
Pilot  
UAL  
8-24-50

Good time  
Saw to Ballance  
August 24, 50

W. R. Thorpe  
Pilot  
UAL  
8-24-50

W. R. Thorpe  
Pilot  
UAL  
8-24-50

W. R. Thorpe  
Pilot  
UAL  
8-24-50

W. R. Thorpe  
Pilot  
UAL  
8-24-50

Weston A. Loegering  
U.A.L. Flite 674  
Aug 24-1950





Elephants swimming  
A herd of elephants crossing the Nile, from about 35 feet  
Photo: Walter Mittelholzer

*Capt. J. Sandank*  
E.A.S.

# THE AIRMAN AND ANIMALS

197

bodies of the hippopotami dive like a flash and send up streams of bubbles.

A herd of elephants swimming across the Nile stirred up the brownish water to waves of foam.

As he flew on over the brushwood-covered plains at a height of about six hundred and fifty feet, Mittelholzer saw dark oval objects, round which tiny white specks were hovering. It was a herd of elephants whose broad backs and big ears showed up above the long grass. Round them were flying the white herons, which follow the elephants and pick out the maggots from their hides. The king of the pachyderms trotted comfortably on, while hundreds of gazelles dashed away at a wild gallop.

When Freiherr von Hünefeld was flying across Burma, he surprised hundreds of elephants in a glade in the green Burmese jungles, where no human foot has ever trod. The beasts were rolling on the ground and fighting with each other. A spectacle that might have come from one of the earliest ages of the earth's history.

Neither the elephant nor the rhinoceros seems to fear an aeroplane, even when it sees one for the first time. In this way they resemble all other large animals that are conscious of their own strength. "The first rhinoceros we met," says Udet, "was a huge bull and it seemed to resent our appearance most violently. It came rushing towards the machine like a cannon-ball, but stopped when we flew over it, and looked up sadly with its little cunning eyes. Probably it was disappointed at having failed to get its horn into us."

The giraffe seems to be prevented from running away less by courage than curiosity. But if he does take to his heels, he can move at a speed of from forty to fifty miles an hour.

Herds of sheep huddle nervously together in a wedge-shaped mass at the appearance of an aeroplane, much as they do when they see a thunderstorm approaching.

No animal, however, reacts in a more curious way than the kangaroo. When Sir Alan Cobham was approaching

*Karl Gertke*  
*London Paris*  
*G. Hermann*  
5-10-60



For Voyagers!  
Esther Mitchell  
9/5/60 (Stewardess)

John C. Barrett Rg 7  
Pan American  
Sept 4/60 Detroit  
New York PURSER  
Jay Koren

198

THE AIRMAN AND ANIMALS

Charleville in his flight across Australia, he came upon great herds of these animals, numbering from four to five hundred in a herd. All the creatures he had so far encountered had immediately taken to flight, but not so the kangeroos: they came hopping excitedly towards the plane. Probably their action was in some way due to fear.

One day Mittelholzer and his comrades flew low along the front of a prairie-fire. As the line of flame ate its way rapidly southward, the animals fled before it, like the heterogeneous occupants of a burning Noah's ark: zebras, gazelles, antelopes, buffaloes, ostriches.

Such a sight could be seen only from an aeroplane; it belongs exclusively to the airman's world. No wonder the aeroplane has become indispensable as a means of transit on expeditions for hunting or making films in the interior of dangerous and unknown countries.

The airman's experience of animals has never been described with so much variety and artistic force as in Mittelholzer's account of his flight over the Serengetti steppes. No other description conveys so vividly and dramatically the charm of observing animals from an aeroplane: "Small herds of giraffes with up-thrown necks are grazing on the succulent foliage of the tree tops; at our approach they take flight in alarm. We pass over the beautiful, shining surface of the lake and see in front of us the grassy expanses of Serengetti without bush or tree.

"It is almost impossible to describe what takes place before our eyes in the next half hour. No part of the world swarms so thickly with wild animals as the country beneath us. We are flying at about the height of a church spire, sometimes no more than thirty-five feet above this grassy paradise with its splashes of yellow and white flowers. In front and behind us, to left and right, hundreds, nay thousands, of zebras, gazelles and antelopes gallop away as though in terror of their lives, all taking the same direction as our machine. The dark wildebeest rush madly away, with lowered head and mane and lashing tail.

Have a pleasant trip!

so glad that  
you like  
the age of  
Tatiana  
Quinn  
(Stewardess)

Mr. & Mrs. C. G. H. H. H.  
decide  
find best  
(mostly is)  
Mr. & Mrs. H. H. H.  
Have a pleasant trip!

Captain R. D. Hesterting  
Trip 58. 4th Sept '60. Pan American. Happy Landings!  
THE AIRMAN AND ANIMALS 199

As far as we can see nothing but fleeing game! The Grant's gazelles probably attain a speed of over thirty miles an hour. Two of these beautiful animals collide and their horns become interlocked; they fall down, but get up again immediately and race away. Herds of grey wild pig take cover with their young; just in front of their lairs they turn round like lightning, and vanish backward into their hiding-places surrounded by a cloud of brown dust. Ostriches do not hide their heads in the sand, as the story goes, but play a speedy part in the great stampede across the plains.

"But there is one species of animal which stops short after a brief but vain attempt to escape, and looks up, defiant but uncertain, at the aeroplane. This is the hyena, which we see slinking about everywhere, that odious, cowardly and murderous scavenger, which devours to the last bone anything that comes between its terrible jaws. Breathless and spellbound, we observe this incredible and marvellous sight. It is only with difficulty that I realize that we are looking at naked reality, and not at a film illustrating the exaggerated tales of some hunter."

Mittelholzer and his companions were staring at the multitude of wild animals, racing in a cloud of dust across the plains, filling the earth to the horizon's edge, when from the cabin came the cry of Lions! There they were—two huge beasts lying on the grass. A sharp turn brought the plane towards them, and the tip of the left wing almost grazed one of their backs. The monarch of this realm of panic-stricken animals did not recoil a single step. He stared fiercely into the air, his jaws thrown wide, and followed every movement of the strange, noisy intruder that circled above him.

The following incident shows that the airman cannot approach the lion, the strongest of the beasts of the plain, without exposing himself to danger. Udet was flying over the same region, preparing to make a film there, and his companion, Suchoky, was flying behind him. On the ground was a family of lions peacefully basking in the sunshine. What a target for Udet's camera! The airmen turned into the wind, closed the

M. S. Hesterting  
Stewardess  
Hope you'll have many more wonderful trips.

Pan Voyagers with SFS  
15/9/60 K. Hesterting  
A/H Melte Aas  
A/H Laila Bull-Hesterting



SAS  
B. Gray Tommen  
SK 532 10/9-60  
Capt. Swanson  
Z. P. Swanson

A/H Alamy Sadus 10/9-60  
Have a nice trip!

# THE AIRMAN AND ANIMALS

200

throttles of their engines and dropped down towards the lions. But suddenly the peaceful scene had changed. The animals crouched furiously and the biggest of them sprang at Udet's Moth. It missed the plane, but as Udet looked round he saw the animal spring again and drive its claws into the aileron of Suchoky's light machine that was following behind still lower. The lion was so strong that the lion turned a complete circle and landed back on to the ground. But a large hole was made in the ground and ragged ends fluttered in the wind as the lion ran.

this first, symbolic struggle between wild

beautiful they are—these pictures of wide open spaces with animals! It is not enough to say that the airman's contacts with the animal kingdom; his experience is all his own—it is unique. His eye chases them over the land and through primitive forests where no hunter has ever been.

Not even the dwellers in the sea can conceal themselves. The airman's gaze pierces to the depths of the ocean.

Kapitän-leutnant Breithaupt, the commander of the airship L.XV. which was shot down over London during the war, jotted down the following observations as he was flying to South America on board the *Graf Zeppelin*: "As we approached the land the first birds we had seen since leaving Spain came flying towards us. Shoals of flying fish, peculiar to tropical waters, travelled over the water in hundreds of thousands of flocks of nearly three hundred and fifty birds. The sun was high in the sky, and the clear water was so blue that it was impossible to take an inquiry into the depths. We noticed that repeatedly came up to the surface of the water, showing its light-coloured flukes and showing its light-coloured flukes and showing its light-coloured flukes. I also noted sev-



SAS, Calo - SK 532 10/9-60

# THE AIRMAN AND ANIMALS

201

shape of a rhombus. These latter appeared always in pairs, and swam the same way as the airship. When the sky is clear and the sun near the zenith, one can see far down into the water of the equatorial Atlantic with its light blue coloration."

These separate observations combine into a comprehensive picture, and show us how animals appear to the airman from his machine. Their special charm is that each records the first experience of its kind.

Man seems to have been born again, a new being that sees the earth lying spread out beneath him, exposed to his eyes, instead of stretching out in front of him, hidden and disguised by woods and mountains. We look into the world as though it were a book, and begin to read there.

And the first chapter is this: the beasts of the earth.

"Flagship Philadelphia"  
American Airlines, Inc.

Here is hoping your first  
trip with American won't  
be your last.

9-20-44  
WA-ID

Captain E. Swanson  
1st Officer B. Swanson

blare Monahan & J. Stwd.  
1131 No East Ave  
Oak Park, Illinois



Frank O. Berg Res. Capt. Portland (Vancouver B.C. Trip)  
 Lynn E. Selfridge 1st Officer Portland 4-23-45  
 Ida O. Kester Stewardess Portland 4/23/45

same crew brought me home - with  
 new stewardess - Miss York -  
 Marcus D. Lunn - N.W.A. Capt. Trip 4 of 4-26-45

Frank C. Good - N.W.A. Sen Mgr Western Pa.  
 H.S. Karsmeyer - N.W.A. 1st Officer  
 Anne Cullen Stewardess  
 611 N. Lee - Seattle, 99, 7m.  
 Phyllis Chase #553 July 2, 1947  
 Stewardess  
 Sail Since #553-7/24  
 Stewardess

Mar. 21, 1946 -  
 Vancouver, B.C. to Seattle -  
 J. B. Sumrell  
 Mary Boye

United Airlines Flight 694 4-21-47 ST-PD  
 Perry Johnson Capt San Francisco  
 R. M. Randall 1st off. San Francisco  
 Frank Stewardess Stewardess - San Francisco

H.F. Larson Captain Seattle  
 J.L. Newquist 1st Officer " United Air Lines  
 Aug. 13, 1948

Margery Burrestin / Ethel Durand  
 We all hope  
 you like our  
 DC-6

MAN DISCOVERS MAN

If the airman at a height of six to seven thousand feet did not know the earth to be inhabited, he would have no means of ascertaining that the grey patchwork below him is the dwelling-place of human beings, unless he guessed it from the buildings man has erected. For we live concealed in a rash on the earth's old face; we hide in the piles and layers of stone that form our villages and towns.

On the ground man seems the most important thing in the world, but how secondary he becomes when seen from above. He is lost sight of in the great spaces of nature and even in the work of his own hands. I have often shaken my head and asked myself incredulously whether these wide expanses of arable land are really cultivated by the few tiny figures I see moving about them, whether the stony masses of the cities were really piled up by the minute creatures that pass like dots along their streets.

Flying teaches one to be modest.

When seen from a great height, man and beast are strangely transformed; they take on odd shapes, turn into strokes and dots arbitrarily animated, that lead a spectral existence on flat surfaces or between other larger shapes, squares, angles and circles. The human species dwindles in the eyes of the airman to something smaller than were the Lilliputians to the astonished Gulliver. The airman possesses a rich heritage from the fairytale, including the living toys of primitive fancy.

But even these tiny playthings he leaves behind him. Soon everything that moves upon the earth has vanished from his sight, leaving only a puzzling network of lines, which fades out as he rises higher still.

American Airlines "Covair" Type Airplane, New York to Washington  
 We hope you are enjoying your ride in our  
 new-airplane.  
 Capt. L.O. Woodell  
 Co. Paul M. Harty

do come to Virginia soon and maybe I  
 will be there. Stewardess. G. New Vaughan

Certainly hope you like our  
 delivery. Enjoy air as  
 much as our DC-6. Enjoyed  
 leaving you on board.  
 8-17-48  
 Yvonne Haravan - Stewardess



(Mother Earth draws all life to herself.) The airman's view makes of all earthly things a unity, as otherwise only death or abstract thought can do.

*For you are made of air's translucent pall,  
And live amidst the clangour of the spheres.  
Scarce nameable, so petty and so small!*

As seen by the airman, men are lifted out of the social scale and put back into the great cosmic relationship that embraces all things. Name, profession, position, these count for nothing. Man becomes formless, a speck of the eternal earth, a part of the globe, an element in creation.

When one is flying high, it is very difficult to realize that those little dots are aflame with passion, full of courage, moved by treachery and malignity; to imagine that such a dot was a Romeo, consumed by the torments of love, an Alexander, conqueror of the world, a Copernicus, to whom the laws of the stars were revealed; that each of these dots is a man or woman, moved by joy and sadness, unable to see himself or herself away from that pale crust of earth!

The airman cannot regard the affairs of these minute dots as of such great moment. He feels a sense of hope and confidence that the people down there will learn to make the short span of their life a thing of greater beauty than it is to-day, that they will learn to keep peace and act in a neighbourly way to one another. We must forgive the airman if he thinks more childishly, more credulously, for he is the child of a new age, the age of flight.

From these heights one regards one's fellow-men differently. Will this new feeling bear no fruit in the years to come?

But sometimes the airman is overwhelmed by the loneliness of the sky. He grows homesick for his fellows. He comes down and looks out for them.

When Lindbergh was nearing the French coast on his transatlantic flight, he caught sight of a number of porpoises



# OLYMPIC AIRWAYS

SUPER DC-6B

The Olympic flight  
crew to Athens  
for the 1st time  
Thank you  
C. P. Parnos

Printed in Greece by "Contagion" - "Moussoulis" Athens

M. PARNOS





Bullfight  
The spectators in the Roman arena at Nîmes, Southern France  
Photo: Associated Press

TRIP 629 SEPT 5, 1948 UAL DC-6  
CAPT Joe Irvine Stewardess  
1st Off. Whitaker Jr. Irene Eastin  
Betty Lane 207  
MAN DISCOVERS MAN

and seabirds which gave him the first indication of the nearness of land. Then a lone fishing-smack came in sight. He could not see any human being on its decks. Soon another little boat appeared and again he looked down attentively and began to circle round it.

Then a man's face appeared at a cabin window.

How deep was his emotion at sight of the first human face after the long solitudes and the menace of death above the Atlantic!

Wolfgang von Gronau was flying above the sea-mists towards Iceland. His wireless operator, Albrecht, sent out call after call, but he could get no response from Reykjavik. Then an answer came from down below. A steamer on its way from Portland to Ingolf sent greetings to the airmen, said it was sorry they could not see each other through the mist, gave them the strength of the wind and wished them a successful journey. The airmen were cheered up instantly.

When Roland Garros first flew across the Mediterranean, aeroplanes were not equipped with wireless. He had been flying for seven hours and had enough petrol left for one hour more. Suddenly he saw on the sea below him three little specks with three little lines of smoke above them. They seemed to be practically motionless. "All my fears vanished," wrote Garros, later on, to a friend. "I was alone no longer. These three little specks were my friends!"

The airman easily sees the tiny dots that reveal the presence of human beings on great stretches of water, even when he is flying at a great height; in the same way he can distinguish men and animals at a great distance on sandy deserts and snowfields. "I saw a large caravan on the desert road in front of me as a number of little black dots. It was the first I had seen that day," writes Mittelholzer. "I overtook them and flew in a south-easterly direction at about three hundred and fifty feet above their heads. In a few hours I should be at Bagdad, the legendary city on the Tigris, while the caravan below me would probably be travelling for another week across

A RARE & CHARMING LOG - WISHING YOU MANY  
MORE HAPPY FLYING HOURS.

F/O Norman Alan.  
UAL Flight 701  
4/12/1960



the pitiless sands of the desert before the city of Haroun al Rashid came in sight. I wonder what the Arabs thought of that great deafening, metal bird on which the head and shoulders of one man, a strange, crouching figure, were outlined against the sky. The airman cannot help pitying the poor terrestrial insects that struggle along below him, moving at a snail's pace in comparison with his own. But this pity changes into shame when those men are his comrades, condemned to fight their way over difficult country while he flies over it so comfortably."

When flying over the icy spaces of the Ross plateau that lies around the South Pole, Byrd came to dangerous chasms that resembled, from above, frozen rapids and whirlpools. In this region was a party of scientists, who had started off weeks before with dog sleighs. Their wireless messages announced that for two days they had been in great danger. Byrd tells us he was almost ashamed, for he flew over these chasms in less than three minutes. Shortly afterwards he saw the sleighs and dogs clearly outlined as black spots upon the snow. It soon became evident that the poor fellows were near their last gasp. They were roped together, with bent backs, some straggling behind, and these signs, together with the slowness of their progress, told an unmistakable story. The men stuck in their toes, the dogs braced themselves with their bellies touching the snow. What greater contrast could be found between old and new ways of travel? When he reached the camp, behind which a snowy peak soared like a volcano in the sunshine, he saw "a cluster of little beetles about two dark-topped tents". He descended to a height of six hundred and sixty feet and dropped provisions and letters attached to a parachute. Then "two or three figures rushed out to catch it". He waved to them.

The effect on the airman of great crowds of people is quite different from that of a single face at a cabin window or a few separate human dots on great wastes of snow or desert. The individual figure, however small, has a significance of its own, but crowds reduce human beings to the level of insects and remind one of the crawling, scrambling masses in a beehive or

an ant-hill. The individual speck is human no longer; it is transformed into something even stranger than the companions of Odysseus after their meeting with Circe. But the airman does not need the herb of Hermes to remove the spell, he has only to plane down from his heights and the men and women below him regain their human form. From upwards of sixteen hundred feet, men and animals become minute, featureless figures recognizable only by their movements. At two thousand five hundred feet they are mere dots.

Freiherr von Hünefeld saw Benares below him as a huge ant-heap. Dropping nearer the ground, he discovered the sacred steps dotted with Hindus bathing and praying. "Looking down on this innumerable and motley crowd of believers, fakirs, beggars and cripples," he writes, "I could not resist a feeling of mournful pity for the wretchedness of my fellow-men." But he was not out for photographs and did not preserve any record of this human staircase. The same impression of swarming ant-like activity is given in an air-photograph taken by a pilot near Peshawar. It shows an open-air meeting of a crowd of Indian Communists or red-shirts, at which thousands of peasants were present. The white smocks of the peasants can be clearly distinguished from the red shirts of the Communists.

Everywhere where multitudes of people are collected, at race-meetings, public processions, religious services and open-air meetings of all sorts, the airman flying at greater heights receives the same impression of insect-like minuteness.

From an aeroplane a bathing-beach appears to be covered with butterflies, some white, some darker; one would think humanity had died out in the cities and that the white floors of the squares and streets were covered with flies and beetles; the round umbrellas of market-women are like mushrooms dotted in the sunshine of market-squares; the great envelopes of balloons cling like champignons to the grassy floors of stadiums. Who is moving those wee white figures, scattered so irregularly on a field of geometrical design? We know by its form that it is a football field. The arena of a bull-fight



Butta Channer 17/9-60

resembles an overturned bee-hive. But as one planes down, bulls, matadors and spectators become animated figures, and even the scurrying shadows acquire human shape. As the airman descends from his heights men become men again. If he watches a group of people in the aerodrome as he comes down, he gets something of the effect of a slow-motion film; he sees them grow larger second by second.

From a thousand feet he can clearly see the peasant girls working in the fields with their bright kerchiefs fluttering in the wind; he can see school-children walking through the dust of country roads, and watch them jump excitedly and throw up their arms towards him. He can tell the difference between a haycart and an automobile, and make out the handkerchiefs waving to him from the windows of houses.

The pilot can form some impression of the national temperament of the people below him by the manner in which they greet him as he passes.

When flying over the steppes of Siberia, Dr. Knauss saw several Mongolian shepherds riding home on their ponies. The plane flew low over the round yourtas, the camp-fires and laagers of the nomads. "They looked up to us without moving a muscle, as though fascinated by the miracle of our gigantic silvery bird above them."

The natives of Paraguay stood equally immobile, as though turned to stone, at their first sight of an aeroplane. De Pinedo tells us: "As we descended we saw natives of a brick-red colour stark naked, staring up as though they had gone out of their senses; they seemed incapable of moving a limb or uttering a sound."

But not all races remain so passive at the first sight of an airman. The reaction of different peoples varies greatly. There is amusing stuff here for a chapter in the history of flight, and the civilized races have nothing to boast of in comparison with the uncivilized.

In 1783 the first balloon, carrying no passengers, came down in the neighbourhood of the French village of Gonesse;

May Soriano



Open-air meeting  
Communist meeting of Indian "red-shirts" near Peshawar. They are clearly distinguishable from  
the peasants in white shirts  
Photo: Scherl





Bathing Beach  
The beach at Wannsee, near Berlin, with gymnasiums and restaurant  
Photo: New York Times



Football match  
between members of the South German League, at the Munich Stadium, 1926  
Photo: Photogrammetric





Balloons  
 Twelve competitors in the heats for the International Gordon Bennett trophy. The balloons are being inflated in the Pitt Stadium, Pittsburgh, U.S.A.  
 Photo: Associated Press

the peasants began to fire at the sinking balloon with their guns and rushed up with hay-forks and flails to give the infernal monster the coup de grace. Then, according to a contemporary report, they fastened it to the tail of a horse and dragged it across the hill until it was worn to shreds.

You have only to read reports of the reception given to-day to famous airmen who have accomplished some record flight and you will be surprised at the lack of commonsense and self-control shown by the crowds. They would rather run their heads against a rotating propellor than wait for the machine to come to rest. Pilots have had literally to be rescued from the enthusiasm of the crowds. On one occasion an official showed great presence of mind by walking off, bowing and raising Lindbergh's straw hat, while its owner was quietly shepherded through the mob in another direction.

The reception given to the balloon in 1783 is no whit more barbarous than that accorded to Hellmuth Hirth in 1911. On his arrival at Nuremberg on the first cross-country flight from Munich to Berlin, for which a prize of 50,000 marks was offered, he found a crowd of many thousand people gathered on the landing-ground. As he planed down the crowd broke through the military cordon and Hirth was obliged to land as quickly as he could before the whole place was covered with people. "What followed now," he writes, "I shall never forget as long as I live. The pressure of the people round the plane was so great that I was afraid it would be lifted clean off the ground. I thought of cutting off lengths from the hose that served as a speaking-tube, so that Dierlahm and I could defend our property if it came to the put-to." Tired to death, the airmen sat wedged in their machine till a detachment of infantry arrived and drove the crowd back. The soldiers clasped hands and their uniforms formed a bright coloured band, swaying to and fro under the pressure of the mob. Hirth stood up and pleaded with them to be reasonable, but as soon as he opened his mouth they roared Hurrah, and refused to budge. At last the airmen were taken in two cars to the barracks about four hundred and fifty yards



away—the journey took an hour and a half. Headlamps, mudguards, and even the bodies of the cars were crushed and damaged in the process. The mob even forced its way into the barrack-yard, and the commanding officer had to sound the alarm and give orders to his men to take the intruders by the scruff of the neck and throw them out.

I could cite many similar reports, but this is, I think, an excellent example of the inferiority of the mass-mind. At the same time it shows the extraordinary lack of culture of the town dweller, in whom the desire for knowledge has deteriorated into vulgar curiosity, enthusiasm has become importunity and to whom wonder and respect are alien conceptions.

How different is the attitude of those who live in the depths of the country or in lands remote from civilization! I have never heard a single instance of really primitive peoples, whatever their colour or race, receiving an airman with hostility. It has remained for the Bedouin tribes of North Africa, living on the edge of civilization, to make a business of shooting down aeroplanes and holding the occupants to ransome. So far the crews of five planes on the French air-mail route have fallen into their hands, and in every case a ransome of from one hundred and twenty to one hundred and fifty thousand francs has had to be paid.

Sir Alan Cobham tells of a tragic experience. He was flying over the desert from Bagdad to Basra, when he heard behind him a strange clattering sound. He looked round in alarm. His mechanic, Elliot, was sitting hunched up, his face as white as chalk and both hands pressed to his breast. An Arab, riding past in the desert sand, had maliciously or thoughtlessly fired a shot at the low-flying plane and had hit the mechanic. Cobham descended by the Chat el Arab and carried the dying man to the bank.

But I have never known or heard or read of an airman making a forced landing among simple people, but the same thing has happened; men and women have hurried up from all sides to gaze with astonishment at the machine, and have

Captain M. K. KACHRU  
INDIAN AIRLINES CORP.  
8/12/60 NEW DELHI

PATRICIA WALTON (Air Hostess)  
INDIAN AIRLINES CORPORATION  
FLIGHT 410 - AGRA TO DELHI (INDIA)  
Best wishes to you always

Calcutta  
F/O R. L. KACHRU  
1st DECEMBER 1960  
DELHI (INDIA)

DEVIENDER SINGH  
R/O 1st N. Delhi  
8-12-60

willingly lent a hand if they could give any help. They have brought bread, butter and cheese wrapped up in bright-coloured cloths, and gladly offered the use of any vehicles they possessed, if the airman had to fetch supplies of petrol from some neighbouring town.

Marga von Etzdorf tells of an old peasant who remained all night in his cart, waiting to take her out to the field where her aeroplane had made a forced landing. When she wanted to pay him for his trouble, he refused the money with a dignified gesture and smilingly explained that it was his duty to help her and he could not accept payment for it.

Late one evening Mittelholzer was compelled, owing to lack of petrol, to land on a field about a hundred and eighty miles from Aleppo. He and his companion had just sat down beside their spirit-stove to prepare a meal, when muffled figures came stealing up through the twilight. The two men seized their weapons in alarm, but they found themselves surrounded by friendly Arabs who invited them with gestures to their village. When Mittelholzer made them understand that he and his companion preferred to spend the night in the aeroplane, they retired as noiselessly as they had come. But first they examined the machine with awestruck eyes, touched its wondrous parts with their fingers, and illumined every cranny with their lanterns. Then they shook hands with the airmen and bade them farewell.

Over and over again Mittelholzer had the same touching encounters with simple people as he was making his great flight across Africa from Cairo to the Cape. Wherever his aeroplane passed, he noticed that at first the natives fled to the shelter of their straw roofs or threw themselves flat on the ground. But scarcely had he landed, scarcely had they recovered from their fright, than they came up to him full of surprise and admiration. "Everywhere," he says, "I was an object of adoring respect on the part of the natives. Over and over again they pointed into the air and described with loud ejaculations the appearance of the *Switzerland* above the distant mountains.

C. E. Kachru  
10-12-60

Curry  
9/12/60

Chhoo  
Cape Boach  
8-12-60  
Bairden F/O

Joe Blom  
F/O  
Machungu  
F/O  
Machungu  
F/O  
Machungu  
F/O



They looked on my plane as a strange living creature that I could guide at will and that obeyed me as its master."

But despite their reverence for him as a divine creature, they always addressed him as *Bwana Ndege*—Lord Bird!

One of Udet's white companions asked a negro of the Massai tribe: "Are you not surprised that these birds can fly?" And the man answered: "Why should I be surprised if you are not?" Udet distributed sausages and biscuits among the natives, and they consumed them with great gusto. But when the chief arrived, he roundly abused his subjects and ordered them to return these gifts immediately. "Do you think," he cried, "that the bird-men have come here from far countries to bring food to you? They must have many days' journey before them, and have greater need of their stores than you, who are at home."

The experiences of airmen among the natives of the far north are exactly the same. The Eskimos on the east coast of Greenland told von Gronau that at first they had been going to shoot at the unknown bird, taking it for a valuable trophy of the chase. But when he came nearer and nearer and they heard the thunderous sound he made, they crept into their huts, fearful of the vengeance of this strange "roaring spirit".

An old Eskimo made some extraordinary comments on the aeroplane to Sir Hubert Wilkins. In his youth, he said, only the Angatkoks, the medicine men, had been able to fly through the air. Now ordinary mortals had learned to do so, but he was sure they would not succeed more than once. For he could never believe that that heavy thing over there—he shook his head and pointed to the aeroplane—would be able to fly again.

Other Eskimos told Sir Hubert, when he visited them a second time: "We thought first that your coming here in a flying-machine was wonderful. It was such a thing as medicine men in olden times might do, but when you left we began to wonder if we had not been dreaming. Now you are here again, we know that airplanes are a fact."



Market  
The market-place outside the cathedral, Mayence  
Photo: Hansa Luftbild G. m. b. H.





Procession  
at the dedication of the Deutsches Museum (1925), Munich. The picture shows  
the Max-Joseph Platz and the National Theatre  
Photo: Photogrammetrie



Worshippers  
leaving the Alexander Nevsky Cathedral, Sofia



# Flight Log

UNITED AIR LINES • MAINLINE AIRWAY • COAST TO COAST



Recorded by the Captain on trip 671 Date 9-21-48  
 Position at 10:10 AM over EUGENE, ORE  
 Altitude: 17000 ft. above sea; 16650 ft. above ground.  
 Our air speed is 280 M.P.H. We have a tailwind of 20 M.P.H.  
 Giving us a ground speed of 300 M.P.H.  
 Temperature: 20 °F at flight level; 60 °F at Seattle  
 Descending at 10:45 AM  
 Arriving Seattle at 11:15 AM  
 Remarks: ALL TIMES PACIFIC STANDARD  
CABIN PRESSURE ALTITUDE 6500

Please pass this Flight Log directly behind you or call the Stewardess and she will do that for you. If you wish to keep a copy of this report, the Stewardess will have the Captain make a duplicate on request. You will find a map in the seat pocket should you care to check this position report.



CAPTAIN

At the fair  
in Nuremberg, with many roundabouts and a great switchback  
Photo: Photogrammetric

Simple minds soon accustom themselves to the idea of flight, for their imaginations have been prepared for it, just as ours were, by the beautiful fairy-tales of childhood.

Freiherr von Hünefeld gives a charming example of the contrary process, of the way uncivilized people make reality into a dream and facts into a legend. When he landed in Mandalay, the ancient capital of Burma, the whole population turned out, for an aeroplane had never been seen there before. The women came in long, bright robes, carrying their children in their arms. Thousands of small, brown, fine-limbed Burmese came streaming through the burning sunshine to the landing-place, stood gaping round the machine and timidly fingered the wings, the propellor and the body.

Then one among them, who spoke a little English, told the airmen a strange story about the Burmese themselves: When the aeroplane had flown across the sky and was on the point of disappearing beyond the mountains, the priests had come out of the temple and adjured it in loud voices to come down, to land in Mandalay, the city of the kings, so that all might see it at close quarters. All the inhabitants of the city had prayed to the "nats", the spirits of the wind, imploring them to make the great wonder-bird alight on the ground. The priests and monks in their yellow ceremonial robes had come out of the monasteries, temples and pagodas, and waved their orange-coloured cloths, until the winds had forced the strange bird to come down and land upon the holy soil of Burma.

And so the aeroplane, which has made a reality of the beautiful dream of flight, has itself become a legend. . . .

\* \* \*

When clouds cover the earth the pilot is alone in the endless spaces of the sky—a solitary human being. But he is more than that, a man without a world.

The aeroplane brings man face to face with a solitude undreamed of before. Only his thought can bridge the gulf between himself and the earth.

Captain Edward R. Crooks  
 First Officer Wade L. Rath  
 Ronald Albrecht  
 Lois Linton  
 VAL. Flight 629  
 SEPT 5  
 1948



The man who has thus lived in the wastes of the sky, cut off completely from the earth, beyond all sign of it, comes back with a new feeling for it. We never yearn for home but when we are away from it; it is then that we realize how much we love it; and so the airman in the wastes of the sky longs to return to the earth and learns to love it as his home.

Descending from great heights, as though from another world, I have often been deeply moved as the familiar life on the ground drew nearer, took form, and was, as it were, reborn in the homing airman's eyes.

In the loneliness of the sky the airman experiences a new feeling towards mankind, towards his fellows who have vanished from his sight, left behind, lost in the unfathomable depths. He seeks them. And he loves them because he finds them.

"I am in love with the universe"

10  
- 100

Betty Stafford  
JCA - Seattle  
9-5-41  
Alameda, Calif.

Capt H.A. Voss J.C.A.  
Flight 2143 Dec 26<sup>th</sup> 59.  
Flt B.M. Kelson  
Stewardess O. Larasewich

368-7-47  
CAPTAIN - X.D. Kuhn  
FIRST OFFICER - Pat O'Day  
Stewardess - Stew.  
Chief - Gloster - Stew.  
Toronto, Can.

W.D. Mitchell  
Captain Northwest Airlines  
Paul Tarrant  
CO-Pilot  
Kathleen Lindberg, R.N.  
Stewardess

Lydia Santilli - Stewardess  
Flight 672 March 9, 51  
Seattle - San Francisco

of never want to board! 3 p

# Flight Log

UNITED AIR LINES • MAINLINE AIRWAY • COAST TO COAST



Recorded by the Captain on trip 527 Date Dec 27, 1946

Position at 4:00 AM over Red Bluff, Cal.

Altitude: 11,000 ft. above sea; 10,500 ft. above ground.

Our air speed is 225 M.P.H. We have a tailwind of 53 M.P.H.

Giving us a ground speed of 170 M.P.H.

Temperature: 58 °F at flight level; °F at .

Descending at 5:40 AM to 6:10 PM

Arriving Portland at 6:10 AM

Remarks: Portland & Seattle weather is excellent.

Please pass this Flight Log directly behind you or call the Stewardess and she will do that for you. If you wish to keep a copy of this report, the Stewardess will have the Captain make a duplicate on request. You will find a map in the seat pocket should you care to check this position report.



CAPTAIN

W.H. S. Farnham





20,150 FLYING HOURS

HERE'S E. Hamilton Lee, pilot of United's Oakland-Los Angeles run as he received official notification that he has more flying hours than any other person in the world. Lee has been flying for 26 years, has never scratched a plane or injured a passenger.

BACK TO EARTH AND OFF DUTY. SKY HOSTESSES READ, SEW, PLAN TO GO PLACES  
In stewardess quarters at the Olympic Hotel, Miss Smith finds Clara Johnson, dean of sky hostesses with seven years of service, reading a book and Myra French busy with needle and thread. Both were between flights on Seattle-California trips. The telephone brought Miss Smith an invitation to go out. The lines' stewardesses must be graduate, registered nurses. Applicants accepted average about one out of a hundred. Living expenses away from their home airport are paid by the company. Starting with eight stewardesses in 1930, United now employs about 150 on its entire system, forty on the Pacific Coast. Their working uniforms are light gray.

