

# Paris to Brazzaville in an RF4

by **Bernard Chauvreau** *Chief Test Pilot of Sportavia GmbH*



At In-Salah, I find neither 80 octane nor Automotive super; I settle for ordinary petrol. The apron is white-hot and the single room of the local Air Traffic Control Authority is swarming with a multitude of wretched little flies which fall hungrily upon my face while I am filing my flight plan.

I fill up and take off immediately for Tamanrasset. The first foothills of the Hoggar appear, and the flight is not relaxing any longer. This mountain range, rising to 10,000 feet in height, is very rough, and the Saharan sun which beats pitilessly on its volcanic rocks, and produces a daytime temperature range of 70 degrees, triggers, in all three dimensions, extremely strong air currents. But I am used to flying in the Alps, and turbulence does not alarm me. I tighten my safety harness and take advantage of rising waves of 1,200 ft/min.

Then a more violent gust than all the others throws all my gear topsy-turvy. The emergency radio somehow ends up jammed behind my back. My computer, after waltzing around the cockpit, has stuck itself between my foot and the right side of the rudder pedal. My No 8 map is lost. But it can't be far off. I get things back in order, and everything returns to its proper place.

A little speck of dust is moving slowly along the track. It is a truck, going northward. At my height (more than a mile above the ground) he has surely not noticed me. This will be the only human presence which I will encounter in three days of flying over the Sahara . . .

For more than an hour the delicate mauve ridge of the Hoggar has been marking for me the QDM of Tamanrasset, and the principal peaks have become recognizable. The closer I get to the mountain chain, the warmer the colours become. The red rocks remind me of the Sierra Nevada. It is the first time I have ever been in such a total wilderness, and I am literally dazzled by the beauty of the landscape.

I set down my wheel on the big runway at Tamanrasset (altitude 4,500 ft) after a flight of 3 hrs 40 mins from the Oasis of In-Salah. The altitude makes the heat tolerable, and the north-west wind which sweeps the plateau brings a semblance of coolness.

I stay at the Amenokal Hotel; the Golden Ram is closed. Don't let these sonorous names fool you; the accommodations are rudimentary: a few whitewashed rooms and, in the restaurant, camel cutlets with lentils, washed down with plain—but good and cold—water.

I would have liked to take the typical photo that every tourist dreams of: my aeroplane in front of a camel, with Mount Tahat (9,700 ft) for a backdrop. But the camel won't go near the aeroplane, and there's no question of dragging the aeroplane through the sand to the camel.

Have you had the pleasure of mounting a camel bareback, sitting astride its pointed haunches? It's a veritable pile of bones, and impossible to hold on to. This camel is immense, and I practically fall off. I visit the 'bordj' (fort) of Father de Foucauld (1858-1916).

The abnormal fuel consumption of the engine has thrown all my calculations into a cocked hat: 2.4 gph since El Golea, instead of 2.1. What am I to make of it? Evaporation due to the terrific heat? Petrol of too low an octane rating? Incompletely filled tank? Let's see . . . The fact is that taking into account this kind of fuel consumption, my range for the stage from Tamanrasset to Agades will be very marginal, which means dangerous in the case of an unfavourable wind. But what should I do in such a situation? Turn back to Algiers? Not a chance of it. There is certainly a solution to be found.

A mad idea comes into my head: anywhere from 2 to 6 gallons of extra petrol would be enough to reassure me. By disconnecting the fuel line in the cockpit which connects my two fuel tanks, I can refuel in flight. With several half-gallon cans and a little household funnel, the job is done. Obviously, that isn't very sensible, but I'm 2,500 miles from my nearest Veritas office. I explain my plan to Mr Coquet, the Shell agent at Tamanrasset.

"You're crazy", he tells me. "You'll blow everything up."

He's right. With the heat of the cockpit, it would be extremely dangerous to transfer fuel on board. So I will have to find another solution.

A truck leaving for Agades could leave a jerrican of petrol alongside the track in some pre-established place. But then it would be necessary to find a truck leaving for Niger, and I could wait days for that. I could also get bogged down (the terror of the truckers) in landing, or, what would be just as bad, simply never find the jerrican . . .

I go through all my calculations over again, scrupulously. Figuring on a normal fuel consumption, my range for Agades is quite adequate. The abnormal fuel consumption certainly must be the result of using petrol of too low an octane rating, since there is no reason for my carburettor to



*The oasis of In-Salah*

have gone suddenly out of kilter. Since there is only one grade of fuel at Tamanrasset, I will fill up with 100/130. By vigorously shaking my fuel tanks, which are still one third full of ordinary petrol, I will create an excellent cocktail approximating the octane rating of 80/87, and I'll decide tomorrow, on the basis of the winds forecast, whether to leave.

For the last time I unfold my one-millionth scale map. It is desperately empty. A single trace of red ink stands out against the uniformly yellow background: the track.

Three hundred and fifty-six miles from the point of departure there is a turning point, at a place called 'In Abangarhit'. The track, which since Tamanrasset has been running southward, turns off noticeably south-eastward, in the direction of Agades. This point must not be missed. I ask Mr Coquet, who knows the route well from having covered it by truck, if there isn't some characteristic landmark (a sunken valley, a river bed) which might give me a chance to find and identify with certainty this turn-off.

"There's nothing of the kind", he tells me. "It's absolute desert. But you'll see some old tyres piled next to the track by the truckers, who camp there often. These old tyres tell you where to turn; all you have to do is find them. Then, a little further on (164 miles!) you'll get to Agades."

April 28—Adopting for the nonce the life-style of alpinists, soldiers, and priests, I get up at 4 am.

The weather forecast is optimistic: visibility, 50 miles; relative humidity, 9 per cent; wind weak at 3 or 4 knots all along the route. No risk of sandstorms at least during the morning, and I expect to have landed at Agades by 11 o'clock.

"You chose your season well," the weatherman tells me. "The sandstorms are over; the worst time for them is February and March." Meteorology is surely a very subtle science, since the information I had received in Paris before leaving had indicated exactly the opposite. At any rate, I prefer the on-the-spot tips.

Considering the near absence of wind, even with the worst possible fuel consumption, I'll still have 2 gallons in the tanks at Agades. Nice to know.

On take-off, a slight disappointment: the VHF isn't working. Since I use it only for landings, I rationalize the loss immediately. The risk of collision is infinitely larger on Sunday evening on the motorway, and nobody has VHF... The sun bursts out suddenly from behind the violet Hoggar. It is a unique and truly grandiose spectacle which one ought to see at least once in one's life.

I find quite easily the beginning of the track, which winds along the bottom of a very narrow gorge. Then, the irregularity of the terrain gradually disappears, giving way to pink sand. Forty-five minutes out of Tamanrasset, I find myself over the most absolute desert imaginable.

I settle down at about 3,000 feet above the ground (about 5,000 ft QHN) and sure enough the small fears which still troubled me as I left now disappear completely. It suffices to *accept* one's solitude, to be at home in the desert, the way you become at home in inverted flight in your first hours of aerobatic training, to see the fear of the unfamiliar sensation vanish as if by magic. "Don't struggle against the desert; adapt yourself": that is the slogan of survival school. I have made some scratches on the throttle shaft with a file, in order to have a crude indication of my fuel flow. In view of the uncertain quality of the petrol, I will best be able to check my fuel consumption by comparing tach readings with the position of the throttle. The mid-point of the flight is 261 miles from the start, and the point of no return near Tassembaldi, unfortunately well before my vital turning point, marked by the old tyres. From here on, all I can do is hang on to that pink sand track for dear life.

After a time, the track becomes so vague that I am obliged to concentrate solely on it, not allowing myself the least distraction. I put my 'lifeline' under the J of the registration number on my right wing, and faithfully watch the track as it pays out slowly behind the trailing edge. Ten seconds of inattention and the track, once lost, would be impossible to find again, it is so fragile, so tenuous. In spite of my dark glasses and the lightly tinted canopy, my eyes hurt from the blinding light and the fatigue of constantly staring at a trace on the ground.

Several times, I am seized by genuine panic: the track has vanished, disappeared completely, and I am tempted to make a 360 to look for it (which would be very dangerous). Then, holding my heading carefully and peering at the horizon ahead of me, I find the track again a little farther along. I wipe my forehead and go on...

Have I not thrown myself into an adventure that is beyond my resources? Have I not perhaps overestimated my abilities, and the capacity of the aircraft? One day three explorers missed the turning point; long after, their jeep and three bleached skeletons were found, beside an exhausted water supply. I think also of the unfortunate aviator William Newton who disappeared in 1933 and was found only in 1962 by a French patrol between Algiers and Gao. And those American tourists who attempted to cross the Nubian Desert in 1959 in a Citroen 2CV, and never reached Johannesburg... My six litres of water wouldn't last long. Well, it's too late anyway to think about it now. When the wine has been poured, it must be drunk, and this is not the time for self-doubt.

I've been flying for more than three hours. The midpoint is behind me, and the point of no return is as well. The fuel consumption is right. It is now simply a matter of finding the turn-off and its inconspicuous landmark. Where the hell are those old tyres? Ah! I'm a long way from the methodical navigation which I learned in flight school. But I have little faith in wind triangles to show me the way to my tyres and my turning point.

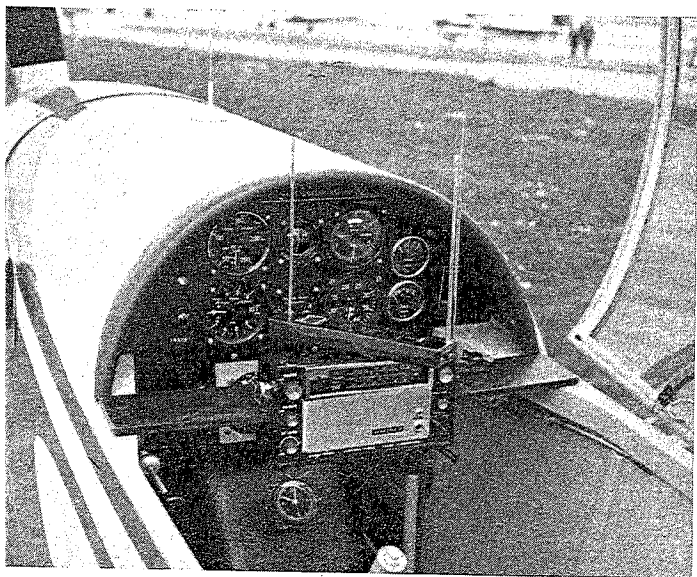
The rear tank is empty, but the main tank is almost full. So I have used 7 gallons so far, which means 2.1 gph, as hoped.



*The author at Toussus-le-Noble before leaving*



*A typical Sahara landing field*



*The cockpit*

Forty minutes after the point of no return, and within a minute of the calculated time, I spot the tyres. The traces of old camps, the cold campfires, some abandoned cans, are all clearly visible. I take a picture, and turn left.

An hour and a half later, I make out the little town of Agades on the horizon.

I plunge into a literally furnace-like heat, and land after 4 hrs 54 mins of flight on the sunburned red clay airstrip. Whew! The Sahara is crossed.

I go down to the village to cool off with a big beer. Then I refuel immediately (with 80 octane this time) and take off at noon in the direction of Zinder.

Trying out a radio homing approach, I pick up the beacon at Zinder easily with my little Aviator II receiver from 60 miles out, and come out with perfect precision over the radio-electric installation, less than a hundred yards from the antennas.

I cover this second stage of the day in 2 hrs 46 mins of flight. But flying in Niger between noon and 3 o'clock without being forced to is an idiocy not to be repeated every day. The temperature of 113 in the shade (and 160 in the sun!) in this hell that is Niger from April onwards makes short work of your will power; and, to say the least, there's a shortage of pubs.

Apart from the overwhelming heat, the stop at Zinder is very pleasant: the satisfaction of a job done (the trickiest part of the trip is over), good company, phonograph records, and as many cool drinks as you like.

April 29—Zinder to Fort-Lamy, 450 miles.

I am already familiar with this particularly delicate portion of the route, having covered it once in an RF3, which I was ferrying from Gap to Fort-Lamy three years ago. Thanks to the new cruising range of the RF4, this time I will not have to refuel at Maine-Soroa and I can reach Tchad non-stop. The enormous Lake Tchad is at the end of the route and my navigation is therefore more casual, since it is a landmark which cannot be missed.

An hour of flight has passed and I undertake to transfer some petrol into the fore tank. But the fuel does not flow, and the bob, rather than slowly rising as it usually does, continues to drop progressively as I burn fuel. What is happening? I glance back and, alas, see the answer. The tank cap, improperly screwed down, has its air vent turned backwards, into a low-pressure area. Even if I put the aeroplane in a slip, the petrol refuses to flow. For once I was a little hasty about my preflight check and now I am in danger of running out of petrol, of all things; I am sorry to have left Zinder in such a hurry this morning. Since it is impossible to adjust the cap in flight, I must find a landing field. I think immediately of Maine-Soroa, which I had so much trouble locating three years ago. If I cannot find the airstrip in order to readjust that damned petrol cap, I shall run dry well before Fort-Lamy, and this savannah with its cracked soil and its sprinkling of stunted brush hardly lends itself to forced landings. How infuriating it is to jeopardize the outcome of such a marvellous trip by such an apparently trivial detail!

Very luckily, I find Maine-Soroa with its vague white runway markers, practically obliterated on the tamped earth. A multitude of termite hills more than 18 inches high are blossoming all over the runway.

I approach on tiptoe, motor throttled back, in order not to attract the attention of the inhabitants of the village, who would all come running like a swarm of bees, and I land, not very gracefully, aiming for a space between two termite nests. I adjust the fuel cap and take off again immediately. Three minutes altogether to carry out the operation, and the petrol is again flowing freely into the front tank.

The horizontal visibility gradually becomes very bad, dropping below  $2\frac{1}{2}$  miles. Five hours later, I make out Lake Tchad just as I am arriving over it. □

*(To be continued next month)*

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## II: Over the Rain Forest

Day 1—Fort-Lamy, Ngaoundéré, Yaoundé: 810 miles of angle.

The dessicated prairie gives way to intermittent vegetation, and as soon as I take off from Fort-Lamy I fly over a herd of elephants partially concealed under the trees. They are less than a hundred yards from a native village.

On the other side of the forest, just by the Logone River, several hunters grouped around a Land Rover are looking in the wrong direction for the herd which I have just seen. The elephants move about slowly, indifferent to the presence of my aeroplane above their heads. Admittedly, I verify the herd at a reasonable altitude, since this tempting game always involves a risk. If one day you pass through Fort-Lamy, get someone to tell you about the glorious adventure of two overly curious pilots who passed a very uncomfortable night astraddle the branch of a tree. The elephants mounted guard a few yards from their broken Jodel, and it was impossible to give them the slip. I myself remember having seen, in the course of a previous trip to the Ivory Coast, the carcass of a little white aeroplane slowly decaying among the peaceful elephants, in the very centre of the inaccessible swampland of Grand-Lahou . . .

Two hours later I am flying over Lac de Léré, Cameroun. About twenty hippopotami are splashing in the muddy water fifty yards from the bank.

On my first pass, plop! everybody submerges at the same time. I make a wide circle and cock my camera. On the second pass, I click the shutter at the very moment that the great pink muzzles reappear at the surface. I return to altitude, and head for Ngaoundéré.

The airport of Ngaoundéré is at 3,500 ft. Fifty-five minutes suffice for the formalities and for refuelling, which is no longer a problem. All around me now is the Rain Forest— but somewhat humanised nevertheless by many small ponds and some sparse little villages, bright spots showing through the foliage.

Cameroun is very mountainous, and my map shows peaks over 6,500 feet high; however, this whole area is covered with thick jungle, which only rarely permits a glimpse of the ground.

In the absence of recognizable landmarks, I navigate by compass and watch. If my calculations are correct, I should reach the Sanaga River in 250 miles, that is, after 2 hrs 10 mins of flight.

The river keeps the appointment. I am a little to the left of my route, and I have some difficulty finding Yaoundé, which is hidden both by the vegetation and by some high ground.

Overnight stop at Yaoundé, change of oil, a check of the aeroplane; everything is in order. I meet a correspondent from *Flying* who is interested in my trip. I stroll about a little in the upper village, which is lovely. The bougainvillias in bloom brighten the entrance ways of the houses with their lively hues. For devotees of local colour, a characteristic detail: black and white prostitution seems particularly prosperous and the girls are less brassy than those of the metropolis; they smile nicely at you. Apart from the landscape and the colours, you could take it for *rue St Denis* (ie Soho.—Ed.)

May 2—Yaoundé, Port-Gentile (Gabon)—375 miles of unbroken jungle and 4 hrs 22 mins of non-stop flight before reaching the Atlantic coast. This is another rather large chunk to swallow, but the navigation is relatively easy, since the sea lies at the destination.

As always in this part of Cameroun, the ground is covered every morning by a fog layer clinging to the tree-tops, and I take off quite late.

Turning toward Fort-Gentil, I level out over luxuriant foliage, with less than 500 feet of ceiling. The jungle is steaming and numerous little peaks are still hidden in the mist. I am constantly obliged to fly around them. There are no landmarks whatever in this burgeoning green carpet, and I simply return each time to a south-westerly heading. At all events I will come to the coast sooner or later. It's a bit too much like the Christopher Columbus way, but otherwise simpler than the crossing of the Sahara. On the other hand, this vast stretch of virgin forest is no more reassuring than the desert, and I cannot help thinking about the ever-present possibility of a forced landing. In order to wander out over these inhospitable regions one must have complete confidence in the airplane, and know perfectly the weather conditions which one will encounter; for a crash is almost always unmerciful. The little four-engine Heron which disappeared with all aboard between Douala and Yaoundé was not found until a year later; and then it was only by chance that a native stumbled on the wreck buried in the vegetation, less than a hundred feet from a road frequented daily by vehicle traffic. And as for the Broussard with its military crew, it was never found at all . . .

One day at Brazzaville I picked up the distress call of a little liaison plane. He was practically on long final: "Mayday, Mayday, oil pressure zero, request landing priority." Then a few seconds later: "Mayday, Mayday, forced landing. I'm going down into a little clearing." I followed the drama and the dialogue with the control tower of Maya-Maya. It all happened very rapidly. Fifteen minutes later I spotted the



wreckage at the edge of the jungle. The crew was unhurt. But it took the Congolese rescue squad three days to reach the wreck!

Examples of this sort—which do not always end so happily—are very numerous, and you have to appreciate the density and the extent of the jungle to understand these things.

After an hour and a half of flight, the ceiling breaks up, as my weather forecast had predicted, and the terrain becomes flatter. But the jungle is still equally thick, equally impenetrable, and I can look as much as I like in a circle 13 miles in radius (my gliding range from 3,000 ft) without finding the least little clearing in which I might land.

What does one do to still one's worries on such a flight? Fly high up? I've tried it; the immensity of the forest, which then becomes thoroughly apparent to you, worries you even more. Listen constantly to the sound of the engine, to catch the least sign of trouble? Depressing, and what's the good? I've stumbled upon the best solution: the ostrich

May 3—Port-Gentil—Pointe Noire (Congo)—360 miles. Since I have only to follow the coast for four hours, my navigational task is reduced to a minimum, and I permit myself the relaxation of a marvellous Cook's tour. It's a genuine photographic safari between 250 and 500 feet, in slow flight, at a normal, human altitude above a dream landscape. How well the Avion-Planeur lends itself to this kind of flying, and how alluring the landscape of Gabon is! Flying silently, motor throttled back, skimming over the lakes to take the secrets of nature by surprise; following and photographing a mother elephant with her calf; startling a flock of befeater birds; sneaking up on a herd of buffalo in a little pale green clearing. I have a wonderful time. Isn't the beauty and poetry of flight precisely in its diversity? How I would love to land, even for a moment, in one of those lovely clearings, or on that coast lined with coconut palms. The Gabonese (and the Gabonesses) are attractive, clever, helpful. But I'm on a flight plan . . . it's forbidden fruit.



*The author in the cockpit of the RF4.*



*The arrival at Brazzaville.*

policy. I put cotton in my ears and take pictures of the vegetation.

At any rate, I am confident in this simple and rustic little motor. And just as in the Sahara, once you have settled down in the environment, once you have accepted the risk, your apprehension is stilled.

Four more hours of flight and I see the coast. The residue of my apprehension vanishes. But a breakdown here, even in sight of a village, even a few kilometers from the shore, would have been almost as bad as in the heart of the jungle . . .

I cross the estuary of the Gabon and at one twenty-five local time I cross the equator. But 'crossing the line' is no longer the thrill it must have been fifty years ago.

I find my pilot friends of Air-Gabon, who are very interested in the RF4, but consider the last stage of the journey very risky in view of the smallness of the aircraft. They fly twins, and even so still frequently make the detour by the coast to cover the same stretch.

Why did I go direct? "It was shorter . . ."

I hear some remarks about me: "very brave"; "reckless"; "dotty".

But enough of that; I arrived safely. And we dined gaily in a very cordial atmosphere.

I am only a hundred miles from Lambaréné. What has become of the Schweizer hospital since I visited the old doctor in 1963? I haven't time for the detour, and I fear disappointment. Albert Schweizer is dead. Is the spirit of his work still the same?

Taking advantage of the stopover at Pointe Noire, I polish the entire aeroplane. Its white and green lacquer is sparkling. Parked in the blossoming shade of the smart clubhouse of the Aero-Club, it resembles a great green cicada. The last hop is for tomorrow, 250 miles due eastward.

May 4—Pointe Noire—Brazzaville.

Again, hundreds of miles of virgin forest, and the crossing of the Mayombé mountain chain is quite difficult. But the weather is very fine. The rainy season is ending, and the season of haze and fog has barely begun.

I overfly Dolisie, then immense sugar cane plantations, then Madingou and again the rain forest. I repeatedly cross the Brazzaville-Pointe Noire railway, which winds along beneath the treetops and disappears in numerous tunnels. The construction of this rail line was quite an epic in its time, and it is said that there lies a human skull beneath every tie.

A little locomotive pulling ten small bright red cars is heading for Dolisie. You would swear it was the set for a western.

identify Mindoulie, and then Kinkala, and I steer wide of a torm which is forming to the north. Finally I make out the reat Congo River, flowing majestically along the horizon. know Brazzaville well, and I have already located Mayalaya Aerodrome, and the native villages of Poto-Poto and as-Congo. My VHF transmitter is still not working. but ranks to my portable backup radio I can receive.

or the last half hour the aeroplanes of the Aero-Club have een patrolling the sky at the edge of the jungle. They are 'aiting for 'their aeroplane', and they spot me at the same me as I them. I am quickly flanked right and left, and we pprovide a parade of honour. They think I have no radio, and are astounded to see with what precision I understand eir every intention. Their solicitude is touching; the stivities will continue unceasingly for three days.

lay 6—The day of the official presentation, and they ask e to put on an aerobatic demonstration, a specialty at hich the RF4 is excellent.

is extremely hot and humid. My clothes cling to my skin, it 15 minutes of aerobatics after 60 hours of flight in a raight line will be a pleasure, and I feel in fine form.

young native boy observes my preparations very tentively and asks naively, "Are you going fly, sir, but you ake signs?" I understand; by "signs" he means aerobatics. d so I go through my usual little programme—with lots signs—and end up with a last barrel roll at about 450 feet. ublictless I could put on a better show, but an old contest um of mine used to say, "Never force your talent; it's ily one step from the sublime to the catastrophic". He's ight. The motor suddenly sputters, and the fuel flow stops. ranks to the flat glide of the RF4 (20 : 1) I roll out, gear vering, and a 180 to final pose no problems, and I land ad stick.

e immediately dismantle the petrol lines, the filter, the rburietor, to collect—half a cup of desert sand!

he sand even gets into the eggs", a 'Blue Man' had said me in the Sahara. In 60 hours of flight the fine silt had wly accumulated at the bottom of the sumps. No wonder, n, that a session of aerobatics carried all those deposits to a carb jet!

ay 7—Return trip in a DC-8, 7 hrs 30 of flight, non-stop, m Brazzaville to Le Bourget.

A's first class service is impeccable. As usual, the wardesses bend over backwards for the passengers, om they treat like convalescents.

ou're not too warm? Are you thirsty? Are you hungry? ve you flown before?"

e Sahara drifted slowly by the window, and I replied to charming hostess that I had.

## Conclusions

ice at the end of such a trip one ought to tot up the erience, I referred to my notes and compiled the follow-figures:

tance Paris-Brazzaville by the route followed: 6,070 es (6,300 starting from the factory in Germany.)

ick to block flight time, Paris-Brazzaville: 62 hrs 33 mins r a block speed of 101 mph).

ual time in flight (not counting taxiing): 57 hrs (for an al average flying speed of 106 mph at 3,300 rpm rather n the normal cruise setting of 3,400 rpm).

al length of the ferry trip, from April 19 to May 4, 1967: days, of which only 13 days of actual flying, since this s neither a rally nor a race against the clock.

eteen stops (of which one unplanned, because of the our to Orleansville due to weather.

al fuel consumption: 150 gallons. The airline fare in first s, by comparison, is £200.

ple asked me various questions about the trip:

hich was the trickiest segment of the route?" I answer esitatingly, "Tamanrasset to Agades with its 525 miles esert without a stop."

"The most tiring part?" "Agades-Zinder-Fort-Lamy, be- cause of the extreme heat."

"The most dangerous stretch?" "Yaoundé to Port-Gentil with its 375 miles of jungle."

"The most pleasant stopover?" "Port-Gentil, and of course Brazzaville."

"The most disagreeable?" "Toussus-le-Noble, before leaving, because of the endless administrative formalities."

For pilots desiring to undertake this kind of trip, here are the main rules to observe:

Prepare the trip as much as possible before leaving, and in the greatest detail: main routes, alternative routes, possible detours. Only use OACI maps, scale 1 : 1,000,000.

Get an ephemeris, for information on sunrise and sunset in the different latitudes and longitudes, through the seasons. A pilot who flies often in foreign countries can't do without this.

Get a good book on survival, such as Troebst's *Art of Survival*. It might be useful some day.

Try to obtain all possible necessary authorizations (ap- proval of auxiliary fuel tanks; overload authorizations; ferry permits; permission to overfly deserts, wilderness regions, open water; political authorizations for overflights visas; etc . . .). These authorizations won't enhance your safety a bit, but they relieve administrators of any responsi- bility. And then . . . since you will never get all of them, get as many as you can and leave anyway, since otherwise you will never leave at all.

In the absence of powerful and reliable radio-navigational equipment, here, in order of importance, are the indispens- able items for such a trip:

—A large fuel supply.

—A very good compass, well compensated, well damped, and two watches.

—A small portable tool set with some spare parts.

—A complete and well-thought-out survival kit.

—A good VHF.

The cockpit must be well ventilated, and my own preference is for an uncomplicated aircraft. In this connection, the RF4 is extremely sturdy and at the same time very astutely designed. Fournier said to me once, "If anyone asks you what my training was, tell them I'm a village idiot with ideas." He meant by that sally that though, with present aeronautical knowledge, it was easy to design an aeroplane that would fly, it was, on the other hand, much more diffi- cult to make it simple and efficient. The simpler a machine is, the less risk there is of its breaking down—that is obvious. Never be in a hurry to finish such a trip. What is most im- portant is to finish in one piece.

In the Sahara, fly only in the morning. And in the regions near the equator, never let yourself be caught by the night, since it falls suddenly, and darkness comes in a few minutes. Flight Plans are obligatory; weather briefings are not. But always ask for a forecast and trust it (a little).

Listen to your friends' advice, but don't follow it. Don't listen to extreme points of view, but take the average. On the other hand, pay close attention to the information of compe- tent persons at each stop, regarding the next leg.

Ah, I forgot—if you are a photographer, take lots of pic- tures for your own personal souvenirs. You won't regret it. But for heaven's sake don't show them to your friends; for some reason, it bores them.

Voyages of this type are worth making, and I admit that for my part—with the help of a certain natural shyness—I like the solitude. One really enjoys the poetry of flight only when one is alone.

But on the other hand, if you're afraid of heat and can't miss lunch and go without drink for six hours at a stretch, if you always insist on comfortable hotels, refined cuisine, a big suitcase full of spare clothing, if you can't stand loneliness—in short, if your desire for comfort exceeds your desire for adventure, don't go. This trip is not for you. □