

# FLYING SAFARI IN SOUTHERN AFRICA

By Steve Dunnett

Well, there we were, all toggled up (more about that below) and ready to go. Sarah and I, along with Mike and Tracy Birchall, setting off from Lanseria airport in the northern suburbs of Johannesburg, on a 12 day self-fly safari up through Botswana and Zambia before returning to the Republic of South Africa. Sarah has long wished to go on an African safari and realised the best way to tempt me out of the lab was to suggest we go fly ourselves. Mike and Tracy operate their own immaculate Alpi Pioneer from the same farm strip in South Wales where we base our Piper Dakota. Although operating a PFA aircraft, Mike is one of the intrepid group of *Flyer*-listed pilots who have combined forces to train together for their instrument rating and are on course to cause a major jump in annual issue of new PPL/IRs. When we raised with them our interest in a self-fly safari holiday, they were up for joining us; and four heads are better than two, not least because Mike knows Africa and African bureaucracy well through his work travels. It was now nearly a year since the original idea to finding ourselves with new South African licences ready to set out from Lanseria.

## Preparations

No doubt you can plan it all out yourself from scratch, but there are South African flying schools that specialise in welcoming European and American pilots to flying in southern Africa, not just for cheap and sunny training but also for the special opportunities provided by flying safaris. Southern Africa not only prides itself in being the cradle of mankind but is home to some of the most amazing wilderness and large game wildlife on the planet. After searching the Internet, extending email enquiries to several safari organisers, and talking to Irv Lee at Popham, we decided to entrust our deposits to Christina and Nick Hanks ([www.selfflysafari.com](http://www.selfflysafari.com)).

They proposed the itinerary, which was personalised to our individual interests and schedule, made all the bookings, cheerfully amending them each time our plans changed; met us at the airport; and generally looked after us like family for all our tourist interests as well as flying preparations. And they prepared trip kits for each of us with all the maps, frequencies, official forms,

international documents and a wodge of cash in each of the local currencies to pay all fees and local fares for every leg of the trip. Faultless.

We spent the first four days at Lanseria receiving detailed briefings on flying at high density altitude (about which, more below), local flight procedures and ATC, and preparing for the South African air law exam. This, along with a general handling test and cross-country check rides, was required for issue of a South African licence (restricted to daytime VFR) on the back of our JAA licences. There have been some horror stories about the bureaucracy of changing regulations for validation of foreign licences during the first half of 2008, with at least one report of pilots who were required to submit copies of their FAA licences three months in advance for issue of a three months restricted licence that had expired by the time they then arrived in South Africa. They were not able to undertake their pre-paid safari. However, the national CAA has been responsive to smoothing out the unintended glitches that accompanied their recently introduced, security driven authorisations (which contrasts nicely with some other national aviation authorities one could name). Licence issue, for us, simply involved sending scanned copies of our licences several weeks beforehand, the two check flights, plus advance completion of a multi-choice

questionnaire in standard aviation format, ending with instructor sign-off. We were certainly dependent however on the Hanks knowing the ropes and taking all the forms through the administrative system behind the scenes.

It need only have taken two days, but we wanted to allow extra time for any hiccups, and this enabled us to take the familiarisation more gently as well as including some extra sightseeing (the University of Witwatersrand 'Origins' museum of early mankind was a must). Our itinerary took in five very different safari destinations: tented camps, hundreds of miles from the nearest made-up road, which were only accessible by charter or private flight in the middle of the salt pans of the Kalahari (San Camp), and in the high inland Okavanga delta (Little Kwara); proper safari lodges in the game reserves, Mashatu on the Limpopo river, and MalaMala on the edge of the Kruger; and the retro-colonial luxury of the Royal Livingstone hotel overlooking the Victoria Falls. I will be pleased to show all 1,700 holiday slides of big cats, little cats, meerkats, ostrich, hornbills, bee-eaters, desert hares and desert scorpions (and all the other big game in stunning proliferation) to anyone with the patience, but this is supposed to be an article for pilots! *Editor: by concession one picture of a wild animal allowed per issue.*





*Two noble steeds, but the 180 hp Piper didn't cope as well as the high wing Cessna*

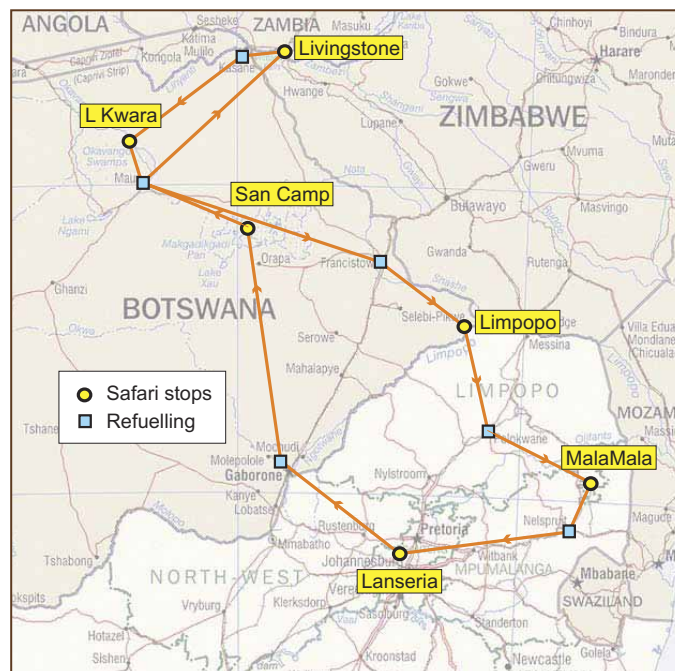
### Hot and high

The first challenge we encountered was density altitude. I may have passed all the theory, but I have never experienced trying to get an aging variable-pitch 180hp Piper Cherokee to maintain level flight when it is 40°C on the ground, which rises to 4,000 – 5,000 feet in central Botswana, and still 30°C at our lowest semicircular cruising level of 7,500 feet. On the first leg of our trip from Lanseria, refuelling and clearing customs in the Botswana capital Gaborone, and onwards across the Kalahari to San Camp, we departed 100lb under 2,400lb MTOW but even with careful leaning I needed full throttle, maximum climb power (25 inches, 2,500 rpm) to maintain straight and level. The needles indicated we were drinking fuel (like Cardiff city centre on a Saturday night).

Dipping the tanks on arrival at San Camp suggested we did not have enough fuel for our next planned destination, Kasane, in northern Botswana, so we diverted to Maun to refuel and confirmed that we had indeed been using 14 gals per hour instead of the book figures of 9-10 for normal cruise performance.

We began to understand why the large engine high-wing Cessna – mostly C182 and C210 – seemed to be the generic light aircraft everywhere we went in the high inland plateaux of southern Africa. The low-wing Piper really is unsuitable for this climate, at least with a 180hp engine (whether our 235 hp Dakota would have sufficed would be interesting to explore, but that will have to be next time). In fairness to the Hanks, this was not the aircraft intended. We had booked two C182s and the second aircraft flown by Mike performed flawlessly in these conditions. However ours went tech the day we arrived and the little Piper was all that was available at short notice. The partial, but adequate,

solution to our performance problem for the remainder of the tour was that Mike and Tracy carried all the luggage, ours and theirs, in the 182. By keeping to under 2,100lb we could manage a normal cruise performance and even manage 100-200 ft/min climb performance for clearing the major ridges. The South Africa escarpment on our last legs goes to 7,600 feet, and it still did not get much below 25°C at 8,500 feet. Well, that was one challenge.



### Technically VMC

The second challenge of hot and high was how hazy it became in the heat and dust. We never saw a cloud in 12 days of flying – not even a little, distant, wispy one – but with no horizon in the haze and a clear view of a total blank white saltpan on the surface there was absolutely nothing to see for reference. It was indeed clear of cloud, in sight of surface and >5km visibility, and so was technically VMC, but to all intents and purposes it required fully IFR procedures to maintain straight and level. And the third challenge was engine management. Of course, I am spoilt at home with an EDM700 and FS450 in the Dakota, and

had to relearn accurate leaning by engine sound alone, which was fine in the cruise. Moreover I had read about and been briefed on leaning on the ground before take off. However, I soon learned from practice to throw the check list out of the window: a normally aspirated Lycoming simply will not fire fully rich on start up at 40°C and 5,000 feet. It required something akin to injection procedures, setting one half inch of throttle, starting with mixture full lean, and tickling mixture in while cranking. Fortunately, I worked that out in time without flooding the engine and before fully flattening the battery because there was no other help available within several hundred miles of the first strips. It all makes sense in theory when you think about it, but experience makes for rapid learning of new tricks.

### Bush flying

Notwithstanding the heat and altitude, flying in and out of bush strips provided less problems than I anticipated, perhaps because I am used to operating a heavy PA28 from a 600m farm strip and so am used to nailing the numbers. All the bush strips were much longer, 1,000 - 1,200 yards, well, I suppose there is lots of space in the middle of nowhere. The usual rules apply, circle the airfield and do a low pass to chase off unwanted wildlife, but we had little problem other than with the occasional antelope or warthog, and none of them refused to scarper, unlike what they say about buffalo. We gathered that hyenas are prone to chew up tyres, and indeed electric fences were erected around our two aircraft to

discourage animals at MalaMala where this has been a real problem. We were advised by the Hanks to ignore advice to pee on the tyres to achieve the same purpose, a local joke played on foreign pilots, in particular if they are female and flying low wing aircraft!

The other feature of flying in southern Africa, especially when leaving South Africa itself, is the distances between usable landing strips, the remoteness in between, the need for detailed fuel planning and importance of complying with regular standard position reporting and search and rescue procedures. Our flights typically involved two legs on each day. We would depart and arrive at one or other P 13 ►

flight and ground training for the Leisure Pilots Licence (LPL) 'The basic LPL allows a pilot to take a passenger after 20 hours of flying, ten of them dual'.

## Aircraft lighting guidance

The International Federation of Airline Pilot Associations (IFALPA) recently published recommendations concerning the use of aircraft external lights. Eurocontrol, BALPA, IFALPA and the US FAA have developed a 'best practice'. Currently there are not any international agreements, or accepted procedures, for the use of aircraft external lights on the ground. For many years the practice of leaving landing lights on after take-off has resulted in a reduced number of bird-strikes.

The following guidelines have been reproduced from *The Log*, the magazine of BALPA.

### Flight crew procedures

Before starting	Anti-collision lights/beacon	ON
	LOGO lights	Operator policy
Taxi-out, moving on own power <sup>1</sup>	Taxi lights <sup>2</sup>	ON
	Nav/Position lights (night)	ON
	Nav/Position lights (day)	Operator policy
	Turnoff lights <sup>2</sup>	ON
Crossing any runway <sup>3</sup>	Strobe lights	ON
	Turnoff lights	ON
	Landing lights	ON
Entering any runway before takeoff	Strobe lights	ON
	when T/O clearance received: Landing lights	ON
Taxi-in, runway vacated <sup>1</sup>	Landing lights	OFF
	Strobe lights	OFF
	Runway turnoff lights <sup>2</sup>	ON

Note 1. To signal intent to other pilots, consider turning taxi and runway turn off lights OFF when stopped, yielding, or as a consideration to other pilots or ground personnel.

Note 2. Runway turn off lights and taxi lights should always be ON during taxi. Outside the runway, they may be temporarily switched OFF to avoid the blinding or dazzling effect, they should always be used when crossing a runway.

Note 3. When crossing a runway, the factual status of the runway, active or not, does not have any effect on the use of lights. Operators or Captains should consider turning ALL exterior lights on when crossing any runway.

Flying Order Books and Ops Manuals requiring a differing usage of lights to the above, take priority.

## CPDLC and ADS

The first business jet aeroplane to use CPDLC/ADS (Controller Pilot Data Link Communications and Automatic Dependent Surveillance) recently satisfactorily completed a transatlantic flight. The aeroplane flew from Savannah in the US to Luton using the system for trans-oceanic communication and position data reporting. The system allows ground based computers to exchange information with the aeroplane's computers. This eliminates the need for pilots to use HF radio communications to obtain clearances and to make position reports.



## ◀ Flying safari in southern Africa...

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of the camps where the airfields are just a strip in the bush with no fuel and services, and the ranger comes out in a jeep to pick you up. The in-between stops were at functional airfields in one of the centres of population. These are little more than small towns in Botswana, where we spent most of our time, with three million people in a land larger than France. At these stopovers we would refuel, pay landing fees, file flight plans for all forthcoming legs, and clear customs and immigration for crossing the international borders. BP is the ubiquitous supplier of fuel— we seldom had more than a 5 minute wait for fuel, and the AirBP card proved invaluable. Now the direct debit invoices have come in, the average cost of fuel over the trip worked out at £1.14 per litre (at an average 9.4 gallons per hour once we had got the weight and balance issues sorted) which we considered not bad by current European prices. Landing fees were similarly modest, maybe \$10 or so a time. In the whole trip we only once came across even a hint of bribery, when it was suggested that 100 pula in the landing fees book might result in more substantial bills for immigration fees being mysteriously mislaid.

### Cross border paperwork

Cross border immigration/emigration and customs controls were however a realm for paperwork. Every flight crossing a border required immigration clearances, customs clearances, passenger fees and general declaration forms for movement of aircraft and passengers similar to the Gen Dec forms we use in the UK. Other than that duplicate copies have to be filed in the right log books, with all the signatures and the appropriate stamps. That can take quite a while to complete, even when the right official can be located in or around the airport and its environs, and when that person can actually find the one right book of forms among stacks of hundreds of identical files within the booth. Patience is a virtue, siestas are good for you, African clocks run at their own speed, and that is what we have come to enjoy, isn't it - and notwithstanding there being only 250 miles to complete on the next leg with nightfall approaching before we can enjoy the safari drive and/or sundowners.

We were strongly advised from multiple wise counsellors that we should travel as aircrew and look like aircrew, epaulettes and all, to smooth our passage through customs and immigration. Mike and I were up for it, Sarah and Tracy considered it naff in the extreme and surely they could not be that gullible... It did however work. With two crew declared and looking the part, all passenger fees were waived, aircrew are left to happily wander around the airfields without being accompanied everywhere, and we could pass through all the border checks carrying only a hand bag of headsets and clipboards. It is only an 'n of 1' (for the statistically minded among you), but the one time we went through a border in our regular short sleeve shirts, was the only time we had to unload all the bags from the aircraft, have everything scanned, and bags opened and searched. We decided to go for the smooth ride and cope with feeling like plonkers!

And in spite of all the quips, Botswana and its people are as wonderful, friendly, vibrant and resourceful as Mma Remotse describes. Thank you Mike and Tracy for such wonderful company. Thank you Nick and Christine for coordinating for us a flying holiday of a lifetime.

