

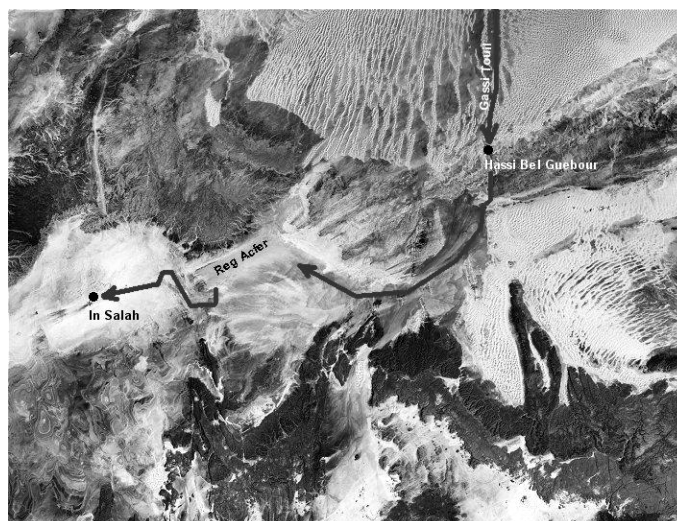
New French hunters on the track !

Christophe and I started searching for meteorites in the Sahara Desert about 2 years ago. So far we have been on 3 expeditions. We both love Desert, and when Christophe heard that meteorites had been found in the Sahara, we immediately decided to go and search for some.

For about six months, we spent hours stuck to the Internet, looking at pictures of meteorites, searching for data about Saharan strewn fields, accurate maps of different areas, acquiring navigation software for my laptop and satellite pictures... We were still sitting at home, but our minds already were there on the Reg... Studying the former issues of the Meteoritical Bulletin and our maps, we found out that more than 300 meteorites had been found and classified on Reg Acfer, but nobody had been there since 1992. As Acfer looked accessible within 3 weeks in & out, we decided this was the place to go ! We then had to prepare the trip itself. We decided to travel just the two of us, with Christophe's 20 year-old Land Rover 88, a well-reconditioned III Series. After a complete check up of the vehicle, we bought all the necessary food for our 3-week trip and left, on December 15, 2001. We drove first to Marseille where we had to catch the ferry the next morning to Tunis. The motorway was covered with snow and we were freezing inside the car as the heater was not that efficient... Almost nobody knew that we were going to search for meteorites. As we were far from being sure of finding any, we preferred not to say anything about it. In that way, should we come back with our hands empty, we would not look stupid !

We spent 20 hours on the ferry crossing the Mediterranean, spending most of the time looking at our maps, studying the locations of the previous finds on Acfer Reg from the coordinates we had found in former Meteoritical Bulletins, thinking of the places where we would be cruising with our eyes fixed to the ground, hoping to spot black stones... We were so excited, looking forward to being there already.

We arrived in Tunis on schedule, and started driving straight away, heading towards Tozeur and Nefta, where we



*Satellite picture of
Acfer Reg area.*

*Acfer appears in fair
grey colour and the
dark arrows show
our route to it and
then to In Salah*

*Picture from NASA,
Arranged by
F. Beroud*

crossed the border into Algeria the next day, through Taleb Larbi. The day after, we started feeling even more excited as we were driving through "Gassi Touil", leading to Hassi Bel Guebour. The road heads south, following the gassi between the huge dunes of the Oriental Erg. This is where we had our first bivouac in the Desert after we left the road, hiding behind a small dune. We found some small pieces of wood before nightfall, and lit a fire to cook. The wind was blowing hard and our pasta was a bit sandy that evening, but they tasted so good ; the taste of freedom and adventure !

The next morning we were in Hassi Bel Guebour, the last stop for water and petrol. The last stage before driving west on Amguid track first and then passing north of Amguid before we would reach the famous Acfer Reg. We met some Italian guys with three motorbikes in Hassi Bel Guebour, who were going to Djanet and would follow the same track as ours for some time. They asked us whether we could carry some petrol for them, which we did. Christophe and I had both crossed the Sahara riding bikes before and knew that they could carry only the minimum, therefore they all appreciated the olives and Pastis that we shared with them at the bivouac that night !

Day 1 – Reg Acfer : 12/21/01

Six days after we had left France, we finally reached the Reg. It was so beautiful, exactly like in our dreams with its flat fair coloured ground, the calcareous surface looking almost like snow under the sun. The ideal place for increasing our chances to find meteorites. We had a panoramic view of the horizon, and space rocks having burned through the atmosphere would

look very different to local terrestrial stones.

We reached the place by noon and stopped for a quick lunch, studying the map and our position against that of the sun, so that we could start our search, driving slowly with the sun behind us in order to have the best chances of seeing the smallest stone which was different from the others. The idea was to do that for some kilometres, and when we reached the edge of the Reg, to drive back faster 200 to 300 metres far from our first path facing the sun, and start again another 200 to 300 metres aside. The goal was to cover the strewn field and to leave no surface where our eyes had not looked. Well, this is great theoretically, but so boring in reality... And then we had to keep an eye all the time on the GPS in order to follow the right direction, which meant one eye is not on the ground and probably missing some precious rocks. After one hour moving up and down, we had found several dark stones but none of them looked like a meteorite. We had seen only pictures before leaving and had never touched or seen physically a real meteorite, so we were quite doubtful about those stones and had kept a few ones in the car, just in case. But we were really fed up after this first hour. We were not there to "follow the line" and this method of research was too strict for us. We stopped and decided not to carry on that way any longer, but to follow both the sun, the field and our inspiration.



*From time to time, we enjoy getting out of the
car for a short walk, still looking around !*



*Looking proud, but feeling so happy after finding Acfer 327 : our very first METEORITE !
Photo courtesy the author*

Twenty minutes later, we saw a black stone laying on the ground. We stopped and realised immediately that it was very different from all the rocks we had seen before. Its colour of course was different, but also the cracks on its surface as if it had been baked in an oven. The way it had been eroded by the wind and the sand was also special. Holding it in our hands, we found it "heavier", more compact than any other stone before, and the down surface was showing some rests of what we imagined could be fusion crust. And then we brought a magnet near by the stone, feeling a strong attraction. **THAT WAS IT, OUR FIRST METEORITE !!!** We even found two small fragments more, laying near by, confirmed to be part of it by the magnet again. What a feeling ! We were holding for the first time a rock from space in our hands, that had travelled for millions of years across the Solar System, landing thousands of years ago by 27°47' North – 04°26' East, where it stayed until we passed by and found it. I felt such a strong emotion, we both were so happy, realising how lucky we were to get our first find less than two hours after we had arrived on site. We tried to keep the control, and marked the coordinates with the GPS, wrote them on a piece of paper with the provisional name that we gave to this wonder : BB001, and the date : December 21, 2001. We then put the meteorite back to the place where it had been waiting for us, together with the record card and made a picture. And finally, we put a bucket up side down on the ground, installed the camera on the top of it, set the timer and pressed the switch to have a picture of the proud hunters sitting by their find ! We did not find anything more that day, but we decided to prepare some nice food for diner, open one of the few bottles of wine we had, and enjoy the bivouac. We could not help taking BB001 out of its plastic bag, to feel it again in our hands, observe it again and again, and try to find out its

weight by comparing it to some of our cans. We had learned about this "weighing method" from reading a book written by some other French meteorites' hunters, Michel and Françoise Franco. Holding BB001 in one hand and the can in the other hand, we decide that it is quite similar to an 800g tin. We will know later on that it weighs 745g. We were very excited but slept like babies that night. BB001 has been named Acfer 327 (MB nr87).

Day 2 – Reg Acfer : 12/22/01

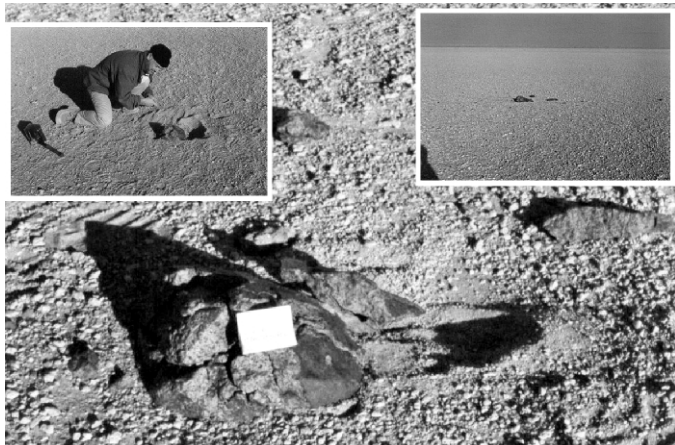
6.30 am, it's time to get up, to take the tents down and make some coffee. One hour later, we are ready to go again opening our eyes as wide as possible, watching around. But we are far away from the first known track, and we suddenly realise that we have forgotten something when we prepared the car before leaving France. The battery has been replaced by a brand new one, but we have no spare with us. Turning the contact key was a bit scary that morning, hoping that the engine will run soon. The place is so flat that pushing the car would be a nightmare, and there is nothing 360° around... Christophe needed two attempts until we heard the engine, but now we can go ! That day again, we saw many dark stones that were very much terrestrial, even if we named some of them BBxxx when we were not sure. We also found some more empty cans, some old radios with their black battery laying aside... All those kinds of stuff that make us believe that we got another find, but when reaching the spot, ... nothing extra-terrestrial. Noon, and still nothing. We stop for lunch, some sweet corn salad with fresh tomatoes and onions, tuna... A great meal ! We need it, because we spent more than four hours and did not find anything. But we should not worry, two hours later, Christophe saw a small dark-brown roundish stone. BB005, our second meteorite was found, and due to our lack of experience, we did not realise

immediately our luck to meet our first carbonaceous, a nice CV3 (Acfer 328). And this was only the second day...

Day 3 – Reg Acfer : 12/23/01

Everything started so quickly that day... Less than one hour after we started, we saw something dark and big on our left and headed for it. But then we saw something smaller on our right and decided to go there first, not to lose it. We stopped and checked, but it was not a meteorite. At that moment, we were about 100 meters away from the first one we had seen. Chris got back into the car and drove to it while I walked. After he stopped and got out, we arrived at the same time, not daring to believe what we thought. It was huge, part of it out of the ground but definitely part of it under, with many fragments around. We watched each other and at the same time, brought our magnets to some fragments. "Clic... Clic !" We watched each other again, and shouted like hell ! I think that even when France won the 1998 soccer world cup, I did not shout that much. We started dancing around it still shouting and singing, almost forgetting to write the records card. We were the best meteorites hunters of the whole planet, for sure !!! After snapping the picture on site, we collected the smaller fragments first and started to dig carefully around the main fragment, discovering that it was even bigger than we expected, with a lot of fusion crust. 30kg ! BB007 (Acfer 329) weighs 30kg ! and we needed more than one hour to collect everything. We gave it a nickname, calling her "James Bond". After we found a place for it into the car, we went on again and 30 minutes later, BB008 came to us, another nice chondrite of about half a kilo, which official name after classification is Acfer 330. What a day ! Two already ! Noon time, quick lunch, and we started again.

BB009 was spread on a wide surface, all the fragments being very dark, some of them with fusion crust, almost no



Acfer 329, « James Bond », a great 30kg L4/L5 chondrite, seen as we found it on Acfer Reg, December 23, 2001 - Photo courtesy the author

attraction to the magnet... they were looking like charcoal pieces and some dusts were sticking on our fingers when touching them. We knew we had something special, and we thought about a carbonaceous because of its colour and texture, but once again, we did not realise completely our luck : we simply had found the very first Algerian CM2, weighing 750g . Its official name is now Acfer 331.



*Acfer 331 : 2 fragments of the only CM2 ever found in Algeria (fusion crust visible)
TKW = 750g - Photo courtesy C. Boucher*

And two hours later, we found the last one for the day, BB010. It was looking nice and tiny, and we learned later on that we had one more carbonaceous, our first CO3, named now Acfer 332.

It was not Christmas yet, but when we stopped for the night, we decided to have the food and the wine that was planned for the next evening ! And we enjoyed it !

Day 4 – Reg Acfer : 12/24/01

That day, apart from a stone that happened to be terrestrial when we showed it to scientists, we did not find any new meteorite. Our first day without a single find, just to recall us that they do not jump in our hands ! We needed it actually, specially after the success we had the preceding day !

Day 5 – Reg Acfer : 12/25/01

South-East of Acfer Reg, there is an area called Aguemour, where 16 meteorites had been found before. Compared to the more than 300 ones found on Acfer, we just saw a challenge to try and find some on Aguemour. We spent Christmas day over there, but noticed that the place was much more difficult : lots of dark volcanic stones spread around, that do not help to see if there is a meteorite somewhere. But before lunch, we had found BB013, a nice L6 chondrite named officially “Aguemour017”. The rest of the day did not bring anything new., but we had reached our 7th meteorite, one day before we had to

leave (we even thought that we had more at that time, before scientists brought us back to Earth, telling us that some of our stones were nothing but terrestrial...).

Day 6 – Reg Acfer : 12/26/01

Our last day on Reg Acfer. We were feeling a mixture of pleasure (a shower would be great and we had more meteorites than we dared to dream of) and sadness... It was so cool to spend almost a week there, alone in the Desert, off the usual tracks... But we knew already that we would come back, and we still had a day actually ! Once again, less than one hour after we finished our coffee, we got BB015, our 8th real meteorite. Broken into many small fragments, it was a bit like BB009 (the CM2), but not that dark... Oh yes, it was another carbonaceous, and another CO3, officially named Acfer 333. Analyses will show later, that Acfer 332 and Acfer 333 are two different individuals, that are not paired. We had to leave then, as the “road” to In Salah is long and rough, and we did not want to rush too much.

were carbonaceous chondrites, 50% ! That gave us the chance to get our ordinary chondrites analysed and classified as well, which is not so easy as scientists do not have much time for more common meteorites.

We got addicted !

Our second trip was in April-May 2002. Sand storms and high temperatures in Tanezrouft did not help that much to keep concentrated on watching around in order to find those black space rocks. For one week, we had 55 to 57°C between noon and 4 pm. But, this is when we found “Naomie”, a 5.4kg dark carbonaceous that has been officially named Tanezrouft 057 by the Meteoritical Society, classified by the MNHN Paris as a C4 anomalous. This stone is amazing. There is no fusion crust at all despite it was almost completely buried but it is very dark, from the black colour of its matrix. And cutting slices is so exciting, as each new section shows incredible large inclusions (CAIs, Dark Inclusions) and clasts ! Finally, during our last trip (Dec 2002



*Apart from finding a meteorite, Bivouac time is certainly the best moment of the day, settling the camp, enjoying the fire and the wonderful sky by night
Photo courtesy the author*

Back to civilization...

It took us one and a half day to reach In Salah, where we enjoyed the hotel and its showers, the food, some cool beers... Civilization is also appreciable after all ! But we already miss the Desert. We spent one more day there, watching our finds in our hotel room, like gold miners in the Far West, after they come back from their secret gold vein... Why not paying for the hotel room with a fragment of meteorite ?! We realised fully our luck one month later, when we brought our finds to the MNHN of Paris and showed them to Michele Denise. 4 meteorites out of 8

to Jan 2003), we did not find any carbonaceous chondrite upon the 43 individuals that we brought back, but we got our first achondrite, a Ureilite weighing 68g and an even smaller stone weighing 50g which is highly suspected to be an impact melt... We also found a nice 30kg L4. Great ! Now we are very excited again, preparing the next expedition for this winter. The addiction to the Desert is confirmed and even doubled by our addiction to meteorites as well !

Frederic Beroud

www.meteoriteshow.com