# **Caving in Ethiopia**

# How to find some of the best caves in Africa

# Where others had never heard of them, and finding a way to put this to some use.

I spell out here six points on how to fall upon amazing caves, such beautiful things your enemies will want, admiringly, to travel with you, your best friends will quarrel each other for months, and give you the fault in the end, probably for having found the object of their desire in such a stunning Country, yet quite a difficult one for newcomers.

Please bear with my rather didactic ways, it happens to me sometimes as I am a professional teacher, too. I mean, apart from bothering all around me, to do things practically no fool had thought of conceiving before in Ethiopia. You find me also teaching uninterested Italian pupils.

Leave your geopmaps home Trust Local Knowledge Make the best use of it Use your capabilities

So here is my first 'blackboard':

# Geomaps

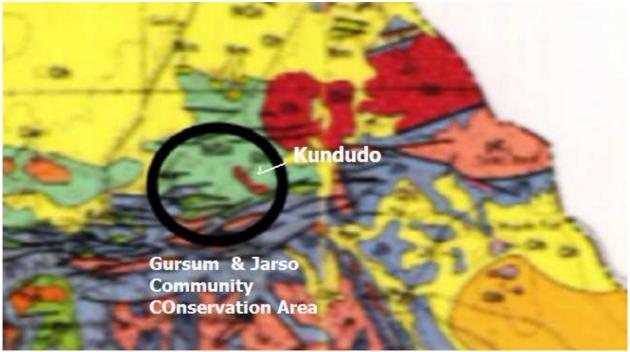
You may use geological maps to have a general idea of the area you will visit. They will not help. You may like to perfect them as you go, but this is not a way to find caves...

My experience is that I came across a stunner of a cave where the map said lavas were, yet it is a carstic marvel. It took me a lot of convincing, as my first speleo group had had a look at the maps. So they would not come with me.

Official, or available knowledge of Ethiopia can be deceiving. As an example from a totally different, yet vaguely related field, the height of Ras Dashen is still 4620 on most maps, we found it at 4550. When we measured it we had found it a good 20m higher, instead, than the best official

measures, that had been around for decades, at 4430. Googling it you do find our measure, mainly on wikis in many languages, but also heights up from 4440, and a very accredited Russian map has it at 4663! The Central Statistical Authority has 25 peaks over 4000m.

Quite a few of those are definitely below 4000, there are may be others above, not listed.



The whole Kundudo should have been basalts.

A good geological map will have faults indicated, this can help. It will give you an outlook of the types of rock you will expect to see. Nothing more. On top of it, some geologists used their binoculars to draw them, not saying this is wrong, but.. apparently they never managed to check on the ground.

Do not forget your GPS, instead. Do not fear cosmic rays that may disrupt its service, you will have the time to wait until it works again, or just need to ask the locals where they saw you pass last time, and the kid along the road will take you exactly where you spent time on your last visit.

# Indigenous Speleological Knowledge

His name was.. Peter Oakley, yes, I am quite sure. He was one of my teachers of rural development issues at an UK University. He riddled our minds with this thing, indigenous technical knowledge, while the Bangladeshi student next to me was totally deceived at the idea those freaky teachers were not calling 'subject matter specialists' to enlighten us, instead of talking some socialist gibberish on what peasants should know better.

For sure I know this much: mountaineers, pastors in Ethiopia know where the caves are. Logic, even though, like our folks in the countryside, they never entered them much, some exceptions noted (the Gursum Pearl had been explored up to one kilometre, before us).

Locals have weird ideas, to the scientific mind, on what is there. So did our grandfathers. It is a simple matter of having the right 'speleo visitor knowledge' to interpret and make use of it! They will, and in fact have already taken the archaeo speleologists to dozens of anfracts filled with ancient paintings, engravings, remnants, pottery... the speleo passionate to good formations. Or lots of funnily dressed ferenjis (white men) up and down endless slopes to see empty, tiny anfracts. For days on end. Drops of water on a stalactite, or under it, are called 'mercury'. The stalactite itself is filled with 'mercury'. Know and use, your teacher's innate sense will conduct you to try and correct the mistake, better do it after a good speleological find.

In any case, if mercury is the word, it means carbonatic solution, or cave speleothem formation. It still goes around some remote Africa, in the Islamic society in particular. It obliges poor peasants, small traders to suspect each other, or accuse those who know of keeping the vital secret for themselves. Some fool, or cheat in Nigeria invented it, more than thirty years ago. Red mercury will make you rich. It can become dollars, or it will make you loved, respected. From what I make and have heard of it, red mercury was used at the turn of the two last centuries, around 1910, as it was more visible than the other one, in some instruments like barometers and thermometers. It is slightly radioactive, apparently, and became obsolete. So it is, indeed, vary hard to find.

In Ethiopia, it might have recently spurned some cave search.

Others came up with the local, western Hararge myth that some peasants have found uranium, and have it well hidden so they sell it for fortunes to some ferenjis.

These two myths can be a nuisance: those foreigners in amazing dresses are either exploiting riches we know not of, or are enriching some 'tenkoy', sons of the Devil, who will then come at us.

Whatever, expect resentment, fear, misunderstanding. I have witnessed our lot, about six Italian and a French speleologist with Nasir, the first Ethiopian practical speleo guy, asking for water and food in the Fugnan Hujuba village under the Kundudo and next to the Pearl. As everybody was afraid, that evening, with some jumping off the road at their fully barded passage, Nasir, the Oromo speaker tried a door. Those in, seeing the escape way blocked by an amazing tenkoy in human resemblances, but with a flame on the front, immediately jumped off the windows.

#### How to make the best of the situation

Expect the unexpected. Prepare a good dose of patience. Never loose it. Just, do not go without one of the very few who know this art, in Ethiopia.

Practice these three Oromo words: Goda, Holqaa, Enkuftu. The first means anfract, the second cave proper, the third, literally, 'the glutton', a deep hole. Italians call 'inghiottitoi', or fast eaters, well like formations.

At least, you will know what to expect. Oromia is where you will find the caves, in any case. You had better, though, direct the search yourself, asking for what you want, showing photoes of what you would like to find. Have to know Amharic, really, or, even better, Oromo.

Years ago, when Matteo Dominioni, Turin University, visited Zeret, the battle cave, Richard Pankhurst advised him to go by the Church's letters. It did not really work then, it would never now. You need letters from the administration. It may not be necessary to go all way up to the Federal State, but.. what if you are in a remote area and the Zone, then Woreda (province) guys are nowhere to be found, do not cooperate or just send you up, in doubt, facing a curious looking ferenji?

So, you had better have a letter from Oromia, Culture and Tourism office, Chaffe Oromiiyatti, well I mean the Oromia main offices on the bole road in Addis. They will send you to the Region and the Provinces. Do not jump an administrative level, you can still make without, at times, but you are looking for trouble and may jeopardize the job of those coming after you. In fact, after some recent events, it is necessary to have a fourth, even higher letter, from Jarra or the Ethiopian Federal antiquity and arts Authority.

Again, rule one, do not leave home those few who know, is the first and foremost rule, really.

Then, do spend time with the last, local administrators in the villages. They know who can spot the places. Without the 'lika membaru', or sheriff's consent, they would not take you there at ease. Trouble is more likely in Eastern than in Western Hararge.

### Ferenji cave knowledge

But, we do know tricks to find caves!

So use them. Adapt, never just adopt. There has been no glaciations, and you cannot evidently today look for holes... in the snow to find high vents.

Logic, so even cave species have had a different evolutions, or there are not so many, we may expect. This clearly has to be investigated, we have only found One species in caves in Ethiopia yet. It has no particular sign of troglobitic life, either. It is a coloured freshwater crab, not a whitened copepod insect or a tiny sponge.



A bat on an eccentric top

has, sure, this 'shell' never been alive?

We will come one day to a stage where we may think of infrared photos from a near hill, perhaps a plane to see temperature variations... as there is no snow.

For the time being, our knowledge is second, third choice. People will take us to the caves, if well directed.



The new crab

part of the cave it dwells

Exploration, finding other entries, looking well around is our business. To be frank, there is so much to find, for the time being villagers around know the main holes, later, it will be another question. But when, I cannot tell.

I guess as so far there is only Dr. Asfawosen, Nasir and me around, a good few years will be needed just to inspect the caves people in the different areas know of. You enter visible, open holes. Those who have spent days excavating trenches as wide as a room, following an air draft, without finding anything know the difference.

We have to select the areas. Nasir has found so much in just a few months, simply asking around, we have now a clear idea of where to go and explore. As an example, he has heard of 54 anfracts and caves in Garua alone.

Ferenjis, through their work, can transform Godas in Holqaas, like it happened with the Gursum Pearl cave. The first name was simply Goda Oromo, the anfract in the Oromo area of Biyyu Negheya village. Now it is Holqaa Oromo, or The Pearl, a 1,4 kms 'long cave'.

Shown stalactite photoes, people may show you stacks of them mouthing out from interstrata, eroded. They are, actually, travertine springs, like these.



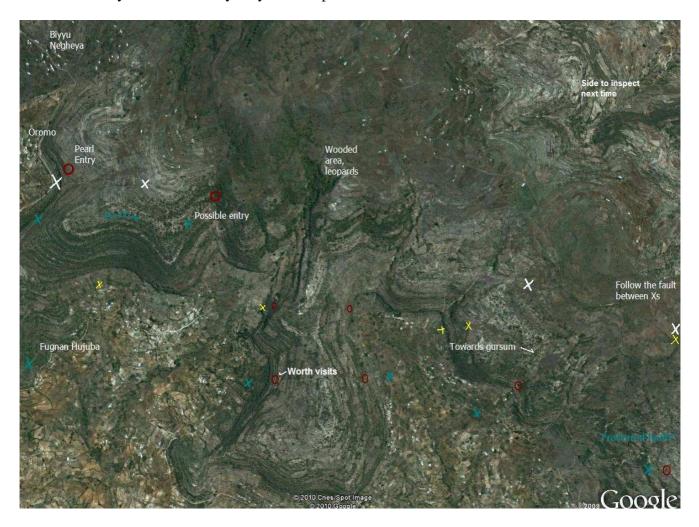
Even tufa dams are not unusual in Ethiopia. Travertine builds up so high it traps a basin. This is sure not where the caves will be, but, in my experience it indicates the right rocks are not far.

Now start looking for faults, and water streams, present or past. Look up from where you are, there may be a gravel descent that is or was a stream, follow it to where a fault meets the valley.

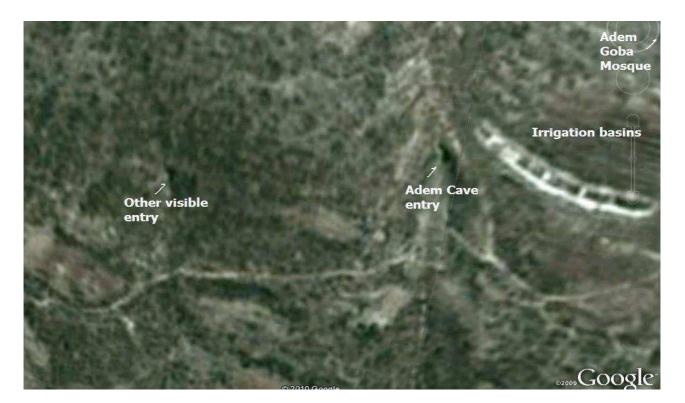
Ask, again, ask those around the area, take time in beating the slopes, in small groups, maximum two to three 'ferenjis', or foreigners per group, not to disturb some suspicious locals.

#### From the Satellite

This is not a joke. Google Earth is slowly covering at high definition vaster areas of Ethiopia too. After discovering, exploring, somewhat promoting the Pearl in the Oromo 'suburb', I realised its fault was clearly seen from... my very old computer at home.



Once a good cave is found, its other entries, other caves can be found along the fault by directing otherwise long and fatiguing research from satellite photoes too.



This photo shows where another possible entry is, side to the noted Adem Goba massive cave entry. We still have to check.

#### Good reasons for all this, what I think will happen

Why we go caving depends on many things. Some like thin, difficult, bone squeezing caves, others huge abysses. A passion, a lifetime issue for some, a short period sometime in youth for others, around my area, a passed idea, as new speleologists per year decline with the number of new enflaming finds.

I started caving as I felt there had to be good caves under 'my' Kundudo. I had even heard two fellows were given as dead, as they stayed some ten hours in a cave. No sign of them, no idea of where the cave was. When we found it, after a couple of days exploring it, I could not sleep for a week. I kept disturbing people around. Yes, no one had ever seen anything anywhere near it in Ethiopia.

It was not the easiest of caves, well, if you do not fear some coldish water, it is very simple. I immediately had the wish to find a show cave. To promote tourism in an area of the world, Hararge, where I have seen the famine I had experienced in Uganda, twenty five years ago, and thought it would just never ever happen again.

This time it was worse. I live here, have married here.

I tried a mathematical model to understand why famines, once a story the grandfather would tell, as they were some 50-60 years apart, happened every seven years or so.

I soon realised the real reason was no demography, bad land use or erosion. The formula forecast actual distances in present tragic droughts, hence hungers, with modifications of one variable alone: CO<sub>2</sub> levels in the global atmosphere. I published it, as unexperimented, an unfinished study as it was, and I got qualified answers, that pointed the fact FAO was in the process of calculating how many exactly will die out of this thing we provoked and called climate change.

I have a sensation, a forecast, actually, it has become a mission: the nature, culture Ethiopia has will foster a rapid tourism development. Those who need grain and have no resources, witness ever failing rains, will reap some, just some benefit from this and may quite well survive.

The whole economy will profit so much, a major contribution to development will have to come from tourism, the biggest voluntary personal transfer of money and ideas from the North to the South of this planet.

I believe we will find a comfortable and easily accessed show cave within four to five years. By then, there will be plenty of projects and funds to develop it.

Within a year of our discovery under the Kundudo, a professional speleologist we have contributed in selecting and forming is roaming the land, and is even paid for his job, under Oromia. One of my personal tasks will be funding a speleo club to promote the art out of our... circle of three. We will need some material and a proper formation course, including cave progression techniques. We will choose a cliff north of Entoto or in Gursum itself, as a training ground. Finding interested young men and women for a first course will not be particularly difficult, it seems some European speleologists may help.

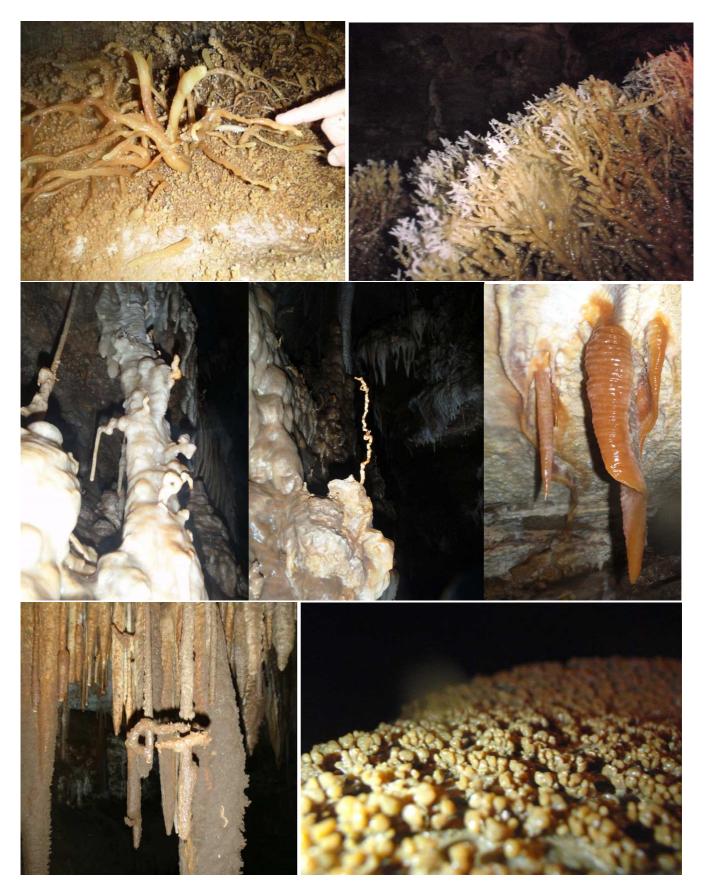
The newly born Ethiopian Speleological Society will slowly have a few clubs, probably not more than two or three, enough to make more finds and explorations of International value. Publications of new caves, other findings and world media will give us some highlight. The message is new and captivating, what we do is a passion, not with the usual media fame hopeful intentions.

No speleologist has ever been made rich by his discoveries, except for that Petzl guy who started mass production of our peculiar tools. Very few indeed have made it to general fame, if any really. We have a better, much truer objective than that. And the specialisations to find a number of new species, more archaeological finds, and more stunners of caves. An objective I think is also a message others will pick up.



A satisfied speleo guy, Biyyu Negheya

Not just caves, Kundudo feral Horses



Some Holqaa Oromo, or Gursum Pearl speleothems. This marvel is unadapted to become a showcave.

**Prepared for a German Delegation visit to the Sof Omar cave.** Marco, Finale Ligure, 20/02/2010